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ABSTRACT

This is one of a set of five handbooks compiled by the Northwest Regional Educational Laboratory which describes the processes for planning and operating a total Experience-Based Career Education (EBCE) program. Processes and material are those developed by the original EBCE model--Community Experiences in Career Education or (CE)2. The area of operations to which this handbook is devoted is evaluation. It contains two basic parts. The "Overview" sets the background for understanding EBCE evaluation and how it relates to other elements of the program. A glossary of key evaluation EBCE terms used is provided. "Steps to Follow" organizes the evaluation process into a sequence of steps. The check list which begins the section provides a useful guideline. Each step in the check list is keyed to a portion of the following narrative, which supplies details and discussion for each point. Appendixes contain supplementary materials. A reproducible materials section, amounting to approximately one-half of the handbook, presents evaluation instruments which may be duplicated and used in evaluating EBCE programs. An index is also appended. (YLB)

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Handbooks for Experience-Based Career Education

# Program Evaluation

CE 028 243

M. Margaret Thorne

Prepared by the Northwest Regional Educational Laboratory
under contract with the
National Institute of Education
1976

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# AN INTRODUCTION TO EBCE

Experience-Based Career Education (EBCE) is a fundamentally different type of education for secondary students. While students in traditional programs attend full-day classes at the high school, EBCE students spend a major portion of their time on learning projects in the community. Activities in EBCE are tailored to individual needs, abilities, learning styles and goals, and students are guided in their learning through ongoing relationships with a variety of working adults in the community.

Through real world interactions with adults, EBCE students learn about careers, about life, about other people, about themselves. In addition, students learn the basic skills of critical thinking, science, personal and social development, functional citizenship and creative development. They gain competence in the skills adults need to function effectively in a technological society. They learn to be responsible by helping design their own learning activities and by following a set of accountability standards that parallel the standards working adults are expected to maintain on the job.

Perhaps most importantly, students in EBCE learn how to learn: how to plan learning activities, how to find and use resources in the community and how to build on experience. Learning becomes for them a lifelong process with its own rewards directly related to each individual's personal choices and goals.

## THE $(CE)_2$ PROGRAM

Since the fall of 1972, a model EBCE program has been operating in Tigard, Oregon, under the sponsorship and technical assistance of the Northwest Regional Educational Laboratory (NWREL) and with funding from the National Institute of Education (NIE). The Tigard version of EBCE--called Community Experiences for Career Education or $(CE)_2$--is a full-time educational alternative for youth in their junior and senior high school years. The program serves about 10 percent of the eligible student body at Tigard High School.

The majority of student learning takes place at sites in the southwest Portland metropolitan area. When students are not pursuing learning activities in the community, their home base is the $(CE)_2$ learning center. Staff at the learning center are not teachers in the traditional sense, but facilitators of student learning, helping students design and follow their own learning plans within a prescribed curriculum and program completion requirements. Volunteers at community sites serve major support roles in student learning. Policies for $(CE)_2$ are determined by a board of directors composed of students, parents, employers, labor leaders and school district representatives. When students leave $(CE)_2$ they receive a unique portfolio displaying their community experiences and accomplishments, and upon completion of program requirements they receive a standard diploma from Tigard High School.

## PILOT SITES

After the NWREL EBCE program was developed and refined over a three-year period at the $(CE)_2$ demonstration site in Tigard, it was then tried out in four school districts in the Northwest. The EBCE program was operated locally by each of these districts with NWREL providing training and technical assistance. Pilot sites were in operation in Colville, Washington; Hillsboro, Oregon; Kennewick, Washington; and Kodiak, Alaska, during the 1975-76 school year. Experiences gained by the NWREL EBCE evaluation unit from working with the staff in the demonstration and pilot sites have served as the basis for writing this Program Evaluation handbook.

## ACKNOWLEDGMENTS

NWREL gratefully acknowledges the talents and energy of the $(CE)_2$ staff and board, who worked in cooperation with the Tigard Public Schools and literally hundreds of students, parents, employers, union representatives and community resource people to give the EBCE idea substance and reality. Their work is the cornerstone of the program described on the following pages.

Special thanks are due to many individuals who conceived and developed the $(CE)_2$ project including Jerry Beier, Leo Myers, Virginia Thompson, Claudia Powers, Iva Boslough, Sandy Kannenberg, Herb Watson, Helen Terry, Karen Wood Norris, William Black, James Reetz, Ken Wanner, Duncan Hunter, Lou Morehouse, Sue Cook, Dick Sagara, Andrea Hunter and Hal Stoltz. Rex Hagans directed the EBCE program.

Tom Owens, Harry Fehrenbacher, Joseph Haenn and Marshall Herron developed and conducted the program evaluation.

The EBCE handbooks were coordinated by Larry McClure and written and edited by Nancy Anderson, Alan Baas, Terry Barraclough, Maggie Burton and Marcia Douglas. Program Evaluation was written by Tom Owens and Joseph Haenn and edited by Ruth Fredine Burt. Mari Van Dyke provided the illustrations in all five volumes.

All of these people are indebted to Corrine Rieder and the Education and Work staff of the National Institute of Education for their belief in the concept of EBCE and their support of its development.

# THE EBCE HANDBOOKS

Program Evaluation completes the five-volume set of handbooks which detail how to set up and operate an EBCE program. Built on its experiences with the Tigard EBCE model, NWREL has compiled these handbooks after several years of development, evaluation and refinement of the program.

Each of the EBCE handbooks is devoted to a particular area of program operations: Management & Organization, Curriculum & Instruction, Employer/Community Resources, Student Services and Evaluation. A program overview brochure complements the handbooks and provides an introduction to EBCE. The brochure contains general information about the EBCE curriculum, key program elements and program evaluation.

Users of the Program Evaluation handbook will want to have the above materials on hand for reference to the more detailed explanations of program elements which they contain. The handbooks are summarized below.

## MANAGEMENT & ORGANIZATION

Management & Organization treats overall operational considerations for an EBCE program: how such a program is organized, governed, staffed and made visible to the public and how everyday program business is managed. The handbook is divided into four sections:

> "Program Planning & Governance" outlines the steps for setting up and operating an EBCE program, including community involvement in program planning, suggestions for surveying potential support, meeting legal and educational requirements, securing program approval and providing an adequate base for policymaking.
>
> "Personnel" describes the general staff functions that are needed to operate an EBCE program. It also suggests procedures and considerations for recruiting and selecting staff, determining salaries and benefits, establishing working conditions, orienting staff and providing staff development.
>
> "Business Management" discusses such operational details as budgets, financial reports, office procedures, insurance, health and safety provisions, facilities and transportation.

"Community Relations" suggests strategies for introducing EBCE to the community and meeting the ongoing information needs of various audiences, both internal and external, including board members, staff, students, parents, business and labor, the educational community and the community-at-large.

## CURRICULUM & INSTRUCTION

Curriculum & Instruction covers the content and processes of student learning in EBCE and the resources a community-based program makes available to students. There are nine sections to this handbook:

"Curriculum Outcomes" provides basic definitions of key curriculum elements and describes what students learn while in the program; the section includes general outcome goals and specific objectives to help staff prescribe for student performance in three broad areas: Life Skills, Basic Skills and Career Development.

"Learning Plan Negotiation" focuses on techniques for individualizing student goal setting and prescribing learning plans tailored to each student's needs, interests, abilities and learning style. Topics in this section include program requirements, accountability standards, assessment, learning site analysis and negotiation of learning activities.

"Career Explorations" describes planning and implementation steps for students' first experiences at workplaces in the local community.

"Projects" describes planning and implementation steps for developing individualized learning contracts with each student that combine activities in Life Skills, Basic Skills and Career Development.

"Learning & Skill Building Levels" describes planning and implementation steps for more extensive student involvement in projects and skill development activities at workplaces in the community.

"Competencies" describes planning and implementation procedures for insuring that students acquire the essential survival skills needed to function in today's society.

"Student Journals" describes planning and implementation procedures for encouraging student use of journals as a means of reflecting on personal experiences and building trust relationships with staff.

"Employer Seminars" describes planning and implementation steps for utilizing community representatives in large group student seminars on important career development topics and issues.

"Learning Resources" describes EBCE's approach to using the community as a vast resource for student learning and details procedures for finding, accessing and using learning resources.

## EMPLOYER/COMMUNITY RESOURCES

Employer/Community Resources treates the establishment, maintenance and use of the network of employer and community sites at which most student learning activities take place. This handbook consists of three sections:

"Site Recruitment" details procedures for involving employers and other community site personnel in the EBCE program. Topics include the role and functions of the employer instructor, estimating the necessary number and types of sites, incentives for participating in EBCE, identifying and contacting potential learning sites and adding sites to the network.

"Employer Instructor Development" describes how participating site personnel are prepared for EBCE responsibilities. The section focuses on planning and conducting development sessions to give site personnel the information and training they need to work effectively with students.

"Site Utilization" deals with the use of employer and community volunteers and sites to deliver student learning. Included are procedures for assessing the educational potential of individual sites (learning site analysis), supporting employer instructors as they work with students (site maintenance) and exchanging information among staff and between staff and site personnel, as well as staff responsibilities for working with site personnel.

## STUDENT SERVICES

Student Services covers considerations and procedures for admitting students to the program, keeping records of student work, credentialing students when they leave the program and supporting individual student growth. The handbook is divided into three sections:

"Program Entry/Exit" details alternatives for enrolling students in the EBCE program and preparing them for a new type of education. Topics discussed in this section include criteria and timelines for student recruitment and selection, recruitment presentations, selection procedures, orientation sessions, transfer into and out of the program and program completion.

"Student Records" covers procedures and considerations for collecting, recording, interpreting and reporting information on student progress through the EBCE program. Sample forms are displayed, including a student credential that provides a permanent record of student performance consistent with the individualized nature of EBCE. The section also includes a discussion of the confidentiality of student records.

"Guidance" concerns those services, processes and interactions that help students understand and benefit from their individual experiences. This section includes discussion of program year action zones, the student accountability system, zone progress meetings, zone debriefings and referral to outside agencies.

## PROGRAM EVALUATION

The Program Evaluation handbook is designed for easy access to "how-to-do-it" information. It contains two basic parts:

The "Overview" sets the background for understanding EBCE evaluation and how it relates to other elements of the program. A glossary of key evaluation and EBCE terms used in this handbook is provided.

"Steps to Follow" organizes the evaluation process into an easy-to-follow sequence of steps. The checklist which begins this section provides a useful guideline for the busy evaluator, administrator or program staff member. Each step in the checklist is keyed to a portion of the following narrative, which supplies details and discussion for each point. Cross-references guide the reader to related material located elsewhere in the handbooks.

Program Evaluation also includes Appendices of supplementary materials and a reproducible materials section, presenting evaluation instruments which school districts may duplicate and use in evaluating their own EBCE programs. An index has been developed for this handbook to help users locate information quickly.

# OVERVIEW

# OVERVIEW

Program evaluation, as an element of EBCE, consists of identifying evaluation purposes; planning and conducting an evaluation; reporting and using evaluation findings. Evaluation focuses on both the planning and operation of the program as well as on program outcomes.

Evaluation data are used at many levels and for making many decisions--feedback to students concerning their progress in various program activities, identifying specific areas in the program needing improvement and determining program impact.

Evaluation data should not be gathered without a prior purpose. To minimize interference with other program operations, only data essential to the total evaluation design should be collected.

## WHY IS EVALUATION IMPORTANT?

1. EBCE evaluation serves immediate program needs for

    a. individual student baseline information which students and staff can use in developing learning programs tailored to each student

    b. ongoing assessment data for refining individual student goals

    c. feedback to students concerning their progress in various program activities

    d. identifying the specific areas of the program needing improvement

2. Evaluation data serve the needs of external audiences (such as school boards, district officials and funding sources) for determining the extent to which the program has met its objectives, assessing costs and analyzing impact on the school system and community.

3. External audiences such as federal and state funding agencies and regional laboratories also need accurate and refined data concerning the effects of EBCE learning strategies and program design. Comparisons may be made, for instance, with other types of career education programs. Assessment will also be made concerning the fidelity of EBCE programs to their original models.

Finally, evaluation results are likely to influence decisions concerning continued funding of EBCE.

## WHO'S INVOLVED IN EBCE EVALUATION?

All adults and students participating in an EBCE program are to some degree involved in its evaluation.

Program staff use assessment information on a daily basis in working with students and reporting on their progress.

Particpating community resource people provide frequent evaluative feedback concerning the performance of individual students with whom they work.

EBCE program directors and school administrators responsible for insuring the program works according to its design require evaluation data effecting implementation policies.

Third party (external) evaluators may be involved in designing and administering evaluation instruments and assessing their results.

## WHO CAN USE THIS HANDBOOK?

This handbook is not intended to train persons to become experts in educational measurement and evaluation. Training seminars, university coursework and internships are available for that purpose. Instead, the handbook is useful in helping EBCE staff and persons already familiar with research and evaluation methodology apply their skills appropriately to specific elements of the EBCE model developed by NWREL.

Presently, those educators most directly concerned with EBCE evaluation will be staff and administrators associated with various sites that are working with the Northwest Regional Educational Laboratory to implement NWREL's version of EBCE in their community.

In short, the handbook is designed to assist in evaluating a complete EBCE program, although portions are useful in evaluating the adoption of EBCE to an existing educational program and in evaluating separate EBCE materials and processes that may be used independently by a school district.

# GLOSSARY OF TERMS

*The terms below are defined explicitly as used with the EBCE program and in this handbook. The same terms could have different meanings in a different context.*

Baseline data--information about students reflecting their status prior to their entering EBCE

Basic Skills--student training or experience in reading, mathematics, oral or written communications

Career Development--curriculum component that focuses on student examination of careers at specific employer sites; comparison of site experiences with personal aptitudes, values and aspirations and learning about problems and issues in today's working world

$(CE)_2$--see Community Experiences for Career Education

Coding--the process of transferring data from one form to another, especially from test booklets to coding sheets suitable for keypunching

Community Experiences for Career Education $(CE)_2$--experimental model of EBCE in Tigard, Oregon, designed to test the idea that young people can receive a comprehensive education by learning directly from adults in the community

Comparison group--a group of students having similar characteristics as those in EBCE who are tested at the same times as EBCE students to allow for a comparison of their growth; the comparison group may participate in an alternative career/vocational education program or simply represent students in a regular school program

Competencies--survival skills considered to be essential for adult roles as citizen, wage earner, consumer and learner; part of the EBCE Life Skills curriculum component

Confidentiality of data--the protection of information about individual persons involved in the evaluation so that their data are not released to unauthorized persons or used in a way that could embarrass or harm them

Control group--a group of students who have applied to enter EBCE but were not randomly sampled from the pool of applicants to participate in the program; these students are tested at the same time as EBCE students to allow for a comparison of their growth with that of EBCE students

Data analysis--methods of processing and statistically analyzing data in order to show relationships, make comparisons or provide descriptions

Demonstration project--the $(CE)_2$ project in Tigard, Oregon, where the NWREL version of EBCE was initially developed, evaluated and refined. This site also serves a staff training and dissemination role and presently demonstrates the utilization of the EBCE concept

EBCE--see Experience-Based Career Education

Employer site--any community workplace agreeing to host students as they learn more about careers while meeting other learning objectives

Evaluation design--the conditions and testing schedule under which the effects of EBCE are compared with competing or contrasting treatments; also referred to as research design

Evaluation instruments--tests and other measures used to collect or record evaluation information

Evaluation plan--a comprehensive plan for an evaluation that generally includes the purposes and audiences for the evaluation; objectives and questions to be answered; evaluation strategies and instruments; procedures for data collection, analysis and reporting; timeline; and assignment of evaluation responsibilities

Experience-Based Career Education (EBCE)--an educational innovation based on the idea that the community can serve as an alternative classroom for comprehensive secondary education by providing "reality experiences" in addition to "book learning"

Experimental group--the group of participants selected to receive the experimental treatment

Experimental treatment--the program which is being examined for efficacy. In this document this treatment will be the EBCE program.

Format--the structure in which data are to be coded and keypunched for computer analysis

Formative evaluation--the gathering and reporting of data for purposes of improving a program or its specific activities

Handbooks--a set of five books in three-ring binders which detail how to set up and operate an EBCE program

Life Skills--curriculum component that includes six areas of emphasis: critical thinking, functional citizenship, personal/social development, science, creative development and the competencies

Matrix--a two-way classification of sets of items with one set going across the page forming columns and another set going down the page forming rows; the intersection of a specific row and column is called a cell

Monitoring data--data recorded periodically throughout the school year on student accomplishments such as the number of student projects completed each quarter

National Institute of Education (NIE)--federal agency providing nationwide assistance and guidance to research and development activities in education; NIE contracts with NWREL to coordinate EBCE development, evaluation, dissemination and training

NIE--see National Institute of Education

Northwest Regional Educational Laboratory (NWREL)--a nonprofit research and development organization contracting with NIE to develop, implement and evaluate the EBCE concept

NWREL--see Northwest Regional Educational Laboratory

Part D, VEA--a section of the Vocational Education Act under which some school districts have obatained federal funds to implement an EBCE program

PERT--see Program Evaluation Review Technique

PHS--see Protection of Human Subjects

Pilot sites--EBCE projects located in school districts who have agreed to use the complete NWREL EBCE program at their own expense and who receive some technical assistance and training from NWREL

Posttest--a testing session conducted at the end of the data collecting sequence of an evaluation study after or near the end of the treatment, such as at the end of an EBCE program year

Pretest--a testing session conducted at the beginning of the data collecting sequence of an evaluation study before or at the beginning of the treatment, such as at the start of an EBCE program year

Program Evaluation Review Technique (PERT)--a planning system for identifying key events in an operation, when they will begin and end, and their interrelationships

Program year action zones--divisions of the program year into three-to-five week periods to facilitate student scheduling and completion of learning activities

Protection of Human Subjects (PHS)--guidelines issued by the federal government or other agencies to insure against an invasion of student privacy and to safeguard the information collected about people

Random sample--the selection of a small group from a larger group without bias; typically this is accomplished by assigning each person a number, then using a table of random numbers to select the small group

Standardized instruments--instruments that have been carefully constructed by professionals and are administered with standard directions under standard conditions with standard scoring techniques and that result in scores that have a norm base

Student outcome goals--a set of EBCE student outcomes in Basic Skills, Life Skills, Career Development and broader outcomes resulting from EBCE experiential learning

Student projects--individualized problem-centered learning strategy that blends activities in Basic Skills, Life Skills and Career Development; activities are usually carried out on employer and community learning sites

Summative evaluation--the gathering and reporting of data for the purposes of making an overall assessment of a program or activity

Third party evaluation--a type of external evaluation conducted by an evaluator who is neither connected with the implementation nor the development of the treatment of interest

United States Office of Education (USOE)--an agency of the federal government responsible for the implementation of many new educational programs. Under Part D, VEA, they have provided money to a number of districts to implement EBCE.

USOE--see United States Office of Education

Variables--the things of interest in a study; for EBCE these include such things as subject's sex, ethnic background, test scores, program processes completed, and attendance

VEA--the Vocational Education Act passed by Congress which includes funds for the implementation of model career education programs under Part D of the act

# STEPS
# TO FOLLOW

# STEPS TO FOLLOW

The steps listed in this section of the handbook cover the major tasks involved in conducting program evaluation. This checklist can serve as a useful way to insure that important steps in evaluation are not inadvertently overlooked. As readers scan the steps, they can determine for themselves whether they have a need to refer to the narrative which follows for additional information and help related to a particular step. While the steps are not always carried out in the fixed sequence in which they appear here, they often occur in approximately that order.

ESTABLISHING POLICIES AND GUIDELINES *page*

1 Agree on basic purposes and audience needs for evaluation *13*

2 Inspect local, state and federal guidelines as necessary to further clarify evaluation purposes *16*

3 Review confidentiality of data and protection of human subjects guidelines as necessary *17*

4 Agree on roles and responsibilities for evaluation *19*

5 Determine the budget, personnel and resources available for the evaluation *21*

IDENTIFYING NEEDED INFORMATION

6 Define and clarify the program goals and objectives and their relationship to the program's processes *22*

7 Determine what specific decisions are likely to be made about the program and identify decision alternatives *25*

8 List important questions that the program staff feel should be answered by the evaluation *26*

9 Establish a priority of what information is to be collected in view of the resources available *28*

## PREPARING AN EVALUATION PLAN

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# Establishing Policies and Guidelines

## 1

Agree on basic purposes and audience needs for evaluation

Basic purposes and audience needs for program evaluation have been summarized in the overview section on pages 3 and 4. Below are examples of evaluation purposes and some guidelines which should be considered in meeting those purposes and responding to various audiences.

### INDIVIDUAL STUDENT PRETEST DATA

The EBCE program has been designed to provide relevant evaluation data to various audiences both within and outside of the project. Much of the data is needed on an individual student level while other data are needed at a group level. Sometimes the same piece of information is needed at both levels. For example, when students enter EBCE they are usually administered a brief student application/ background questionnaire plus a series of evaluation instruments used for pretest purposes. Information about a particular student's career interests, level of performance in various areas of the basic skills, and educational and occupational aspirations is useful to the EBCE staff in developing learning programs tailored to each individual student. For example, career interest data identified through the Self-Directed Search, the Career Information System or some similar instrument provide staff with an understanding of the initial occupational areas students may wish to explore or which are suited to their interests and/or competencies. Data from the Comprehensive Test of Basic Skills or other achievement tests give an indication of which students may need additional diagnostic assessment, tutoring or special work in programmed instruction materials in reading or arithmetic. These Basic Skills data also help staff set criteria for initial student performance on projects.

### GROUP PRETEST DATA

Data collected on individual student interests, vocational preferences and knowledge and performance levels in Basic Skills are also useful when reported at the group level. Such information allows the staff to understand the range of students' ability in the program; to determine if particular strategies, such as tutors in Basic Skills, may be needed on a broad basis; and to identify program areas that may need special attention, such as providing employer-conducted seminars on techniques for having successful job interviews. These same data serve as a baseline from which to measure the growth of students in program goal areas over the course of the year.

## FORMATIVE EVALUATION

The above discussion has illustrated how student pretest data can be used effectively at the individual student and group level to develop individualized student learning programs, identify instructional areas needing special focus, and provide a baseline for measuring student growth. A fourth purpose for evaluation, commonly called formative evaluation, is to identify ways in which the program may be improved. Questionnaires completed by students, staff, parents and employers gather perceptions of the program's strengths and weaknesses and recommendations for change. These questionnaires should be supplemented by informal daily contact among students, staff and employers that allows program participants to express their judgments of how things are progressing and to identify areas where change may be needed. These questionnaires and informal conversations can be supplemented by other types of formative evaluation, such as interviewing a sample of employer instructors who attended an employer training session, to solicit their reactions and to determine what they perceive as their role in EBCE.

## ACCOUNTABILITY

A fifth purpose for evaluation differs from the others in that it addresses the concerns of an audience external to those participating in EBCE--that is, district officials, school board members and the community in general. It aims at identifying the extent to which program objectives were met, how program costs were incurred, the impact on the school system and community, and any side effects the program may have, such as its possible impact on other career or vocational education programs within the district.

## PROGRAM ADOPTION

People outside of the district may have information needs which your evaluation data could supply. Representatives from other districts considering the potential adoption of EBCE, or, in cases where external funds are used to operate the project, funding agencies such as the state or the United States Office of Education (USOE) may find interest in your results. These external audiences are interested generally in the same issues as those listed under the discussion of accountability. In addition, they are likely to be interested in issues such as what problems were involved in initiating that type of program and how consistent a given EBCE program's operations are with respect to the NWREL model of EBCE. Evaluation can also assess any modifications that might have been made to the EBCE model and identify reasons for these modifications. In addition, funding agencies generally look for evidence to help them decide whether to continue funding of the program for the following year.

Before developing a specific evaluation plan it is useful for the program evaluator and project staff to meet to identify the major purposes and audiences for the evaluation. Together they can systematically decide if the audiences will include students, staff, parents, participating employers and community resource people, school district personnel, school board members, funding agencies, other interested educators and the general public. Such a decision influences steps 7 to 9 which deal with identifying information needed for the evaluation.

## 2 Inspect local, state and federal guidelines as necessary to further clarify evaluation purposes

If a district is receiving state or federal funds to operate an EBCE program, it is essential that the evaluator and project director be familiar with any evaluation guidelines prepared by the funding agency. School districts receiving federal funds from the U.S. Office of Education through Part D of the Vocational Education Act, for example, need to be familiar with the Part D guidelines which include expectations for a third party objective evaluation.[1]

Even if no outside funding is used to operate an EBCE program, the project director and person(s) conducting the evaluation should check with the school district to determine any local policies related to program evaluation. Such policies might relate to parental approval for a young person's participation in the evaluation; procedures for confidentiality of data, protection of human subjects and review of evaluation instruments by the community; or use of school district resources in conducting the evaluation.

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[1] *Exemplary Projects in Vocational Education, Criteria for Selection of Applicants for FY 76. Federal Register, Vol. 40, No. 220, Nov. 13, 1976.*

## 3

## Review confidentiality of data and protection of human subjects guidelines as necessary

The issue of protecting the rights of human subjects has received increasing attention in evaluation during the past five years. When developing new programs, there are six elements that should be reviewed to insure that neither the program nor its evaluation methods cause harm to program participants:

1. program design
2. evaluation design
3. evaluation instruments
4. security of data
5. confidentiality of individual respondents
6. release of findings.

In reviewing the design of a program such as EBCE, it is important to insure that it does not cause students to close options in their lives. For example, it would be unfortunate if a program were to lock students into learning only about their first occupational choice and to ignore other possibilities throughout the year. Likewise, it would be harmful if EBCE provided for the needs of students planning to enter trades after graduation but ignored the preparation of students who might want to attend college.

In developing an evaluation design the desire for a thorough evaluation should be balanced by a concern for safeguarding student and staff time. Thus, while eight hours of pretesting might give an evaluator "comprehensive" data, such a procedure ignores the rights of the students. Such extensive testing also may cause an undue negative attitude toward the program and may result in the collection of invalid data. Sensitivity to conserving student time, for example, has led EBCE evaluators to recommend administration of only three subtests from the Comprehensive Test of Basic Skills rather than using the entire battery, thus reducing test time for Basic Skills from four hours to one hour.

Evaluation instruments should be essential, related to areas needing assessment, and should not contain items that could cause a student embarrassment or that are strictly personal. To insure that instruments used by them in evaluating EBCE are appropriate, the NWREL EBCE evaluation unit has had their own instruments reviewed in advance by an independent Protection of Human Subjects Committee at NWREL.

It is also useful to have a district's EBCE Advisory Committee review and approve evaluation instruments in advance to insure that the items are not offensive to the local community. As an additional precaution, individual students should be free to omit an item, subtest or test if they feel it would be harmful in some way.

After evaluation data are collected, it is important that they be kept in secure places until they are keypunched, scored or no longer needed. This prevents unauthorized persons from having access to student scores or other results. EBCE staff should also keep any confidential notes on individual students in secure places such as locked file cabinets.

When interviewing persons or asking them to complete questionnaires, you should guarantee them that their individual responses will be kept confidential and that only a group summary of the data will be released. This is particularly important when respondents are asked to identify program problems or weaknesses. In cases where the evaluator receives data on individual students through the mail from districts, student code numbers can be used and later matched with proper names. Data received should be maintained securely in lockable metal file cabinets.

A district planning to contract for the evaluation of EBCE should have a policy regarding how and by whom findings will be used and released.

Guard against the inappropriate release of evaluation data to the media. Standardized test scores for each school should not be released without proper adjustment for or inclusion of socioeconomic or other pertinent data. Misleading data of this kind have caused the public to form inaccurate interpretations and to demand changes that may not have been warranted.

## 4

### Agree on roles and responsibilities for evaluation

Agreements about who will plan, conduct and report EBCE evaluation results should be reached by a school district shortly after the decision is made to conduct an evaluation. Depending on the basic purposes for an evaluation, the evaluation might be conducted informally by the project director and staff or more formally by persons within or outside of the school district. Guidelines from funding agencies sometimes specify the type of evaluation to be conducted.

EBCE sites receiving USOE, Part D, VEA funds are required to have a third party evaluation performed by a person or agency external to the district and the model of EBCE being utilized. Sites not receiving Part D funds are free to determine who will conduct their evaluation. Since evaluation is built into the EBCE instructional system, students and project staff are necessarily involved in an internal evaluation. To the extent that a district may desire credibility for the evaluation results, an external evaluation can be very beneficial. However, even when an external evaluation is performed, close cooperation with the internal project staff is essential.

Several additional factors are important to consider in deciding who should conduct the evaluation. One of these is the availability and capability of an evaluation unit within the district itself. Some districts have a highly trained and efficient research and evaluation staff that is experienced in conducting various types of evaluation. When this is the case, the district may wish to have the evaluation done by that unit if it has the available time and resources. The district may also wish to involve an outside person or agency to work with the district in such areas as setting up an EBCE evaluation design, designing any special instruments that may be needed, scoring and analyzing data, or maintaining an up-to-date file of the status of all program participants.

In the case where a district does not have a skilled evaluator available within the district and funds are available, it may wish to contract for all or part of the evaluation. When selecting an evaluation individual or agency, the following factors should be considered:

1. training of the evaluator in research and evaluation methodology
2. experience in evaluating educational programs

3. skills in developing new instruments that may be needed
4. data analysis capabilities
5. familiarity with career or vocational education
6. availability and geographic proximity to the EBCE site
7. skill in relating to students, employers and public school staff

Districts can save substantial amounts of money by having their own staff actually collect most of the data. When performing this role, staff should understand the purpose for each instrument and should have had some training in how to administer it. (Explicit step-by-step instructions for administering selected instruments are given in Appendix B.)

## 5

## Determine the budget, personnel and resources available for the evaluation

Before preparing an evaluation plan, it is useful to estimate the budget available for conducting the evaluation and to identify personnel and resources that could be made available for evaluating the EBCE program. The resources available (or not available) often influence whether an evaluation is conducted by project staff evaluators within the district or external evaluators. Available evaluation resources within the district can also affect the tasks left to be performed by an external evaluator. For example, if an external evaluation is being contracted and the local district maintains an efficient print shop, it is probably most cost-effective for the external evaluator to prepare a camera-ready copy of instruments and reports for the district's printing or duplicating facilities.

In considering personnel within the district who could assist in the evaluation of EBCE, it is often useful to look beyond persons trained in research and evaluation. For example, an EBCE program may be able to arrange for the district's director of curriculum and instruction to evaluate a sample of student written projects and reports using a predesigned rating sheet. Teacher aides could be trained to collect certain kinds of data.

# Identifying Needed Information

## 6

Define and clarify the program goals and objectives and their relationship to the program's processes

Goals identify what accomplishments are expected by the EBCE program. They usually deal with student learning outcomes but can also be directed to other processes or outcomes of a program, such as the active participation of community resource persons or the recruiting of at least two employer sites for each student in the program. Program objectives specify in greater detail what is to be accomplished and provide evaluation criteria for measuring discrepancies between what is planned and what actually occurs. A very generalized objective may be a valuable one in concept, but difficult to evaluate. Before evaluation can proceed, it is necessary to review the program's goals and objectives to be sure they are expressed in clearly understood and measurable language.

With individualized programs such as EBCE, not only can student learning processes vary for different students but student objectives themselves can also vary among students. The NWREL version of EBCE contains some outcome objectives that are identical for all students (such as the competencies), some that apply to all students at a general level but vary in the way they are defined for individuals (such as projects in each Life Skills area), and some outcomes that are completely optional for students (such as in-depth study of a particular career through a skill-building level).

At the demonstration site in Tigard, Oregon, NWREL evaluators and project staff developed 22 student learning outcomes covering the program areas of Basic Skills, Life Skills, Career Development and broader maturation goals. The NWREL evaluation unit found it helpful to keep these student outcomes at an intermediate level of detail rather than to specify them in strictly behavioral terms. Individually negotiated student projects, on the other hand, contain specific behaviorally-stated objectives for a given student together with the resources that student has agreed to use and the criteria that will be used by the learning manager and student in evaluating those objectives.

Local EBCE project staff need to work with the evaluators in defining and clarifying major student outcomes. In doing so it is useful to keep in mind that certain goals (such as improved competence in arithmetic) can be considered direct outcomes of the program and activities developed with each student to lead to those outcomes while other goals (such as openness to change) are indirect outcomes and may not have specific activities geared to achieving them.

## RELATING LEARNING PROCESSES AND OUTCOMES

A matrix can be used to clarify the relationship between student learning processes and desired student outcomes. In the sample matrix which appears on the following page major outcomes are listed along one dimension and learning processes along the second dimension. Such a matrix is useful in establishing that one outcome may be achieved through more than a single process. It can also help establish the extent to which EBCE is an individualized program with optional paths available for different students. It is useful for the project staff to work with the evaluator in developing such a matrix before evaluating a particular EBCE program. This type of matrix has also been found useful by project staff in clarifying expected outcomes for each learning process used in a project.

### *CROSS-REFERENCES*

*The Curriculum & Instruction (C&I) handbook contains a detailed description of student competencies (pages 331-337), Life Skills projects (pages 195-198), and the skill-building level (pages 277-278).*

*An example of an individually negotiated student project is found on pages 200-204 of Curriculum & Instruction handbook.*

## EBCE PROCESSES

*Note: This is a sample matrix; terms appearing here reflect but are not identical with terms used to describe the current NWREL model of EBCE.*

| Student Outcome Goals | Career Explorations | Learning Level | Skill Building Level | Special Placement Level | Projects | Employer/Community Tutors | Employer Instructors | Employer Seminars | Group Meetings | Guidance | Student Negotiations | Accountability System | Informal Social Time | Student Journal | Media Assisted Learning | Certification of Competencies |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **BASIC SKILLS** | | | | | | | | | | | | | | | | |
| Fundamental | | | | | | | | | | | | | | | | |
| General | XX | XX | X | X | XX | X | X | X | X | | X | | X | X | X | |
| Reading | | XX | | X | XX | X | X | | | | | | | | X | |
| Writing | X | XX | | X | XX | | X | | | | | | | X | | |
| Oral Communication | XX | XX | X | X | XX | | X | X | X | | X | | XX | | | |
| Mathematics | | XX | X | | XX | X | X | | | | | | | | XX | |
| Applied | | | | | | | | | | | | | | | | |
| Reading | | XX | | X | XX | X | X | | | | | | | | X | |
| Writing | X | XX | | X | XX | | X | | | | | | | X | | |
| Oral Communications | XX | XX | X | X | XX | | X | | | | | | | | | |
| Mathematics | | XX | X | | XX | | X | | | | | | | | | |
| **LIFE SKILLS** | | | | | | | | | | | | | | | | |
| Critical Thinking | XX | X | | X | XX | | | | | | X | | | | | |
| Functional Citizenship | | X | | XX | XX | | | | X | | | | | | | |
| Personal-Social Development | X | X | X | X | XX | | | X | X | X | X | X | X | | | |
| Creative Development | | X | | X | XX | | | | | | | | | | | |
| Science | | X | | X | XX | | | | | | | | | | | |
| Competencies | | | | | | X | X | | X | | | | | | | XX |
| **CAREER DEVELOPMENT** | | | | | | | | | | | | | | | | |
| Identifying Career Interests | XX | X | | X | X | | X | | | XX | X | | | | XX | |
| Understanding Work | XX | X | X | X | X | | X | XX | X | X | | | | | XX | |
| Employability Skills | X | XX | XX | X | X | | XX | X | | X | | | | | | XX |
| Career Knowledge | XX | X | X | X | X | | XX | | | X | | | | | X | |

*XX Primary Process for achieving a student outcome*
*X Secondary Process for achieving a student outcome*

*Each learning process is described fully in the Curriculum & Instruction handbook.*

## 7

## Determine what specific decisions are likely to be made about the program and identify decision alternatives

As a preparation for identifying information needed for the evaluation, it is useful to clarify project objectives and their relationship to the program's processes as described in step 6. A second source for identifying information needed for the evaluation is to determine what decisions are likely to be made about the project and to arrange to collect data useful in making these decisions. The timing of these program decisions can also be of critical importance where refunding or possible expansion are involved. For example, the evaluator in interviewing the project director may learn that the project is thinking of combining the role of learning manager with that of employer relations specialist. If the project had a total staff of seven, the evaluator might help the staff set up an evaluation of staffing patterns in which several staff combined the two roles within the same person while others continued to function in one or another of the separate roles. The reactions of employers, students and staff to these two alternative staffing patterns could be evaluated together with other criteria such as the average length of time it took in each of the two situations for a student project to be written or reviewed and the quality of resulting projects.

## 8

## List important questions that the program staff feel should be answered by the evaluation

During the planning phase and first year of operating an EBCE project the evaluation can often be most useful by focusing on important process or outcome questions that the program staff feel should be answered by the evaluation. These questions usually go beyond asking whether the project's objectives were achieved and sometimes deal with issues not addressed by the objectives of the project. The box below shows some of the formative evaluation questions raised and addressed in the first few years of evaluating the EBCE demonstration project in Tigard, Oregon.

### EXAMPLES OF FORMATIVE EVALUATION QUESTIONS

1. How effective were the EBCE student recruitment procedures and how could they be improved?
2. How is student descriptive information communicated to and used by employer instructors?
3. How many occupational clusters are represented by the EBCE participating employers?
4. Is the Student Accountability System understood by students and functioning effectively in terms of utilization, follow-through and results?
5. How much involvement do students have in setting goals for their own learning and for selecting content and designing activities to achieve these goals?
6. What influence, if any, has EBCE had on the District's Cooperative Work Experience Program or existing vocational education programs?

A list of important formative evaluation questions can often be developed during the summer or at the beginning of a school year. However, an effective formative evaluation should also be responsive to special information needs that may arise from the project staff at any time during the year. In many cases the evaluator can suggest to the staff ways in which they can collect and analyze data that are important to them in operating or modifying the program. A particular concern regarding formative evaluation is the need for timely reporting of the information. For example, the results of a simple questionnaire completed by participants at an EBCE employer training seminar and a discussion of staff reactions to the seminar may be most appropriate on the day following the training seminar. Such information is important in improving future seminars.

## 9

**Establish a priority of what information is to be collected in view of the resources available**

After completing steps 6 through 8 it is quite probable that the information identified as needed for the evaluation (based on the list of project objectives, anticipated decisions to be made, and formative evaluation questions) is far greater than can be collected with limited evaluation resources. Priorities must be established.

It may not be essential or even appropriate to evaluate each of the identified student outcomes during a particular year. In general, it is often more desirable to concentrate on evaluating process objectives during the first year or partial year of a project's operation than to concentrate on student outcome objectives.

After project objectives have been clearly written and agreed upon by the evaluator and staff, the evaluator should try to gain a sense of relative importance among the goals in the opinion of the staff. This can be achieved by asking the staff individually to rank order each student outcome or at least to indicate opinions as to whether each outcome is of high, medium or low importance in their EBCE project. A tabulation of these independent ratings and group discussion can often lead to a general agreement within the group about which outcomes should receive the major attention during the course of a year.

The evaluator might also work with project staff and high school officials to determine whether each student outcome could be considered unique to EBCE students, whether it is shared by students in other programs within the district (such as a Cooperative Work Experience Program), or whether it is common to all high school students within the district. This kind of distinction is important for determining whether an outcome should be measured only for EBCE students or whether it might also be valid to measure it for students in another alternative program or for students in the general high school population. Such decisions are important not only for determining how each outcome is to be measured (see steps 11 to 13 on pages 33 to 42), but also for deciding what comparison groups might be relevant to use with a particular student outcome objective (see step 10 on pages 30 and 31).

There are a few criteria that may be useful to project staff in helping to establish a priority of information needs. These criteria have been presented in question form and appear in the box on the next page.

## CRITERIA FOR ESTABLISHING A PRIORITY AMONG EVALUATION INFORMATION NEEDS

1. Is the evaluation of this objective or program area required by federal, state or local guidelines?
2. Is this objective or area central to the success of the project?
3. Will the information gathered be of importance to project decision-makers?
4. Has this or similar information already been collected? (If yes, do we need to address the same issue again?)
5. Has the project been in operation a sufficient length of time to warrant evaluating this area at this time?
6. Do we have (or can we obtain) sufficient expertise to adequately evaluate this area?

# Preparing an Evaluation Plan

## 10

Describe the program and student populations to be evaluated

A comprehensive evaluation of EBCE should include a description of the program characteristics and the student populations involved. Our evaluation experience with the EBCE pilot sites has suggested that a description of certain context characteristics is useful in communicating an understanding of the setting. These characteristics include: the community, the district, the local high school(s) from which EBCE students come and local career/vocational education alternatives available for students.

A description of the local EBCE program itself would generally include objectives, organizational structure, (including staffing pattern), management procedures, curriculum components, learning processes, student recruitment and selection procedures and costs.

### STUDENT POPULATIONS

In addition to describing the local EBCE program it is also important to describe the appropriate student populations. These students include those in EBCE itself, those in any comparison or control groups and perhaps a random sample of students from the regular high school. Part of the student group descriptions may be obtained from cumulative file data from prior years such as achievement test results (if available), prior grade point averages and average number of days absent from school.

Use of various types of student comparison groups can provide an important additional dimension to the evaluation of certain student outcomes for which an external comparison is valid. For example, in assessing the growth in career knowledge and attitudes made by EBCE students it would be appropriate to compare such gains with those made by similar students who volunteer for a specific school-based career education or work study program. Without the use of such comparison groups it becomes impossible to address the issue of whether the EBCE students might not have been able to make the same gains over the school year without being in the program.

Three types of comparison groups are useful: 1) a random sample of students from the regular high school, 2) a control group of students who originally volunteered for EBCE but who were not randomly selected to participate and 3) students in a school-based career/vocational education or cooperative work experience program. Each group is discussed below.

## Random Sample

The random sample of students at the high school can be used to determine the extent to which students who volunteered for the EBCE program were similar to or different from the "average" high school student. This information is important in understanding the nature of students attracted to EBCE. Selected information such as aptitude or achievement data already on file for all of these students from the past few years can be used as the basis for this comparison together with the Student Background Questionnaire that can be completed by the random sample and comparison students in September and October. This questionnaire contains a subset of the items, which are administered to the EBCE students, dealing with past work experience, attitudes toward school and parent's education and occupation. Except for this questionnaire, the random sample students would not need to be tested or surveyed again.

## Control Group

A control group consists of those students who initially applied for admission to the EBCE program but were randomly selected not to participate. (This group could exist and be used only if the pool of student applicants for EBCE exceeds the number that can actually be admitted by at least 20 and a random assignment of students to EBCE is made from all those who apply.) Through random assignment, students in the true control group can be assumed to be of the same background and ability as those admitted into EBCE. Therefore, gains made by these control group students over the year in areas such as Basic Skills can be separated out from the gains made by students in EBCE to get a picture of the gains that can be attributed to the treatment effect of being in EBCE.

## Comparison Program

The third comparison group is that of students in a school-based career/vocational education or work experience program. Because these programs may share some of the same objectives as those of EBCE, students in this group can be tested at the beginning and end of the school year on those instruments that measure the common objectives of the two programs. The results of this comparison will provide evidence regarding the extent to which the outcomes produced by the two programs differ.

# AVAILABLE INSTRUMENTS

Three instruments have been developed by the NWREL EBCE evaluation staff to assist in describing the program and student populations to be evaluated--the EBCE Essential Characteristics Checklist, the EBCE Process Checklist and the Student Application/Background Questionnaire. A copy of each instrument is located in the Reproducible Materials section of this handbook.

The EBCE Essential Characteristics Checklist was designed to describe the extent to which a project possesses the philosophical foundations of a NWREL EBCE site. It covers five component areas of the program. These components are that EBCE: 1) is an individualized program, 2) is a community-based program, 3) is an experience-based program and is built from the career activities of adults, 4) must have its own identity and be comprehensive and integrated, and 5) places a major emphasis on the career development of students. Each component area contains from four to six essential characteristics. These characteristics are rated on a scale of 1 to 5 with the anchor points prespecified.

A second checklist, the EBCE Process Checklist, is intended to complement the EBCE Essential Characteristics Checklist by identifying operating procedures used in an EBCE program. This process checklist contains four sections: 1) EBCE objectives, 2) management and organization processes, 3) curriculum and instruction processes and 4) student services processes.

A third descriptive instrument is the EBCE Student Application/Background Questionnaire. When students formally apply to enter EBCE they are asked to complete a brief application questionnaire that records information about family background, student's previous employment history, short- and long-range educational and work goals, past involvement in high school and community activities and reasons for wanting to enter the EBCE program. This information is used to describe the students entering EBCE and comparison groups. Changes over the year in areas such as students' educational and occupational aspirations can be documented since some of the same questions appear on both the Student Application/Background Questionnaire and on the Student End-of-Year Questionnaire.

## 11 Identify data sources and appropriate ways to obtain the information needed

Once an agreement has been reached on the areas to be evaluated and on the priorities among these areas, it is then essential to identify data sources and to decide on the most appropriate ways to obtain the information needed.

The data sources include both the persons and documents from which evaluation information can be obtained. Experience gained from evaluating the NWREL EBCE demonstration and pilot sites indicates a number of useful sources for obtaining important evaluation information. The box on the next page displays these sources and examples of data that can be collected from each source.

## EVALUATION STRATEGIES

A comprehensive discussion of evaluation techniques and strategies is beyond the scope of this handbook. However, there are a number of practical resources available in this area.[1] Because time and

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[1] *The reader may wish to read the section on "data sources" in:*

> *Anderson, S.B., Ball, S., Murphy, R.T. and Associates. Encyclopedia of Educational Evaluation. San Francisco: Jossey-Bass, Inc., 1975.*

*Sections of the following may also be of interest:*

> *Isaac, S. and Michael, W.B. Handbook in Research and Evaluation. San Diego, Ca.: Robert R. Knapp Co., 1971.*

> *Owens, T., Haenn J., and Fehrenbacher, H. "The Use of Multiple Strategies in Evaluating an Experience-Based Career Education Program." Research, Evaluation and Development Paper Series No. 9. Northwest Regional Educational Laboratory, 1976.*

> *Worthen, B.R., and Sanders, J.R. Educational Evaluation: Theory and Practice. Worthington, Ohio: Charles A. Jones Publishing Co., 1973.*

## USEFUL EBCE DATA SOURCES

| *Sources* | *Examples of Data* |
|---|---|
| Participating EBCE students | Student's scores on measures of basic skills; career development; and attitudes toward the program, themselves, education and work |
| Control and comparison group students | Scores of measures of basic skills; career development; attitudes toward themselves, education and work |
| Graduates of EBCE | Their current educational or occupational activities, degree of satisfaction with their activities, and reflections on the usefulness of the EBCE experiences |
| Dropouts from EBCE | Their reasons for leaving EBCE and their attitudes toward the program. |
| Parents of EBCE students | Their descriptions of the strengths and weaknesses of EBCE, benefits of the program to their son or daughter and their involvement in the program. |
| Employers or community resource people | Their judgment of the progress of students with whom they worked, the impact of EBCE within their organization and their perceptions of the program's operation and their role in it |
| EBCE staff | Their judgment regarding the importance and effectiveness of various EBCE learning strategies, factors contributing to and factors limiting the success of the program, and recommendations for program change |
| Project directors | Their perception of the degree to which their site has implemented the NWREL version of EBCE; description of their site, the local school district and the community; and program cost data |
| Student completed projects | Judgments about the extent to which the life skills projects met their goals, capitalized on student interests, were experiential in nature, and effectively utilized community sites |

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evaluation resources are important constraints, it is generally wise to consider a variety of potential evaluation stragegies and then to analyze the alternatives to select the minimal number of strategies needed to accomplish the job. Factors important to consider in determining priorities among potential stragegies include: 1) costs, 2) timing, 3) credibility of findings, 4) degree of obtrusiveness, 5) amount of coordination needed, and 6) efficiency.

## Cost

Cost factors to be considered include the cost of purchasing or developing an instrument as well as the cost to administer, score and analyze it. The amount of time involved of students, staff or community resource persons is often overlooked but should be taken into consideration in determining costs.

## Timing

The timing of an evaluation strategy is another crucial factor. Several elements of timing need to be considered including: 1) the deadline when the information is needed, 2) the length of time it would take to plan, collect and analyze data, and 3) the most appropriate time in the developmental cycle of a project for collecting certain data.

## Credibility

Credibility of the findings is something that is often overlooked until an evaluation is completed and the data reported. Some audiences such as educational researchers may be impressed with "hard data" such as a multivariate analysis of scores from a standardized test. Other audiences, such as parents, may be more informed by well written student case studies. In addition, credibility of the evaluation findings can be enhanced when several evaluation strategies produce results that reconfirm or support what was found through the use of a single strategy.

## Degree of Obtrusiveness

Another important factor to consider in selecting evaluation strategies is the extent to which a given strategy will be obtrusive and perhaps clash with the mission and activities of the project. The evaluation of a sample of already completed student written projects provides an excellent insight into student learning outcomes without requiring additional time of students. On the other hand, it may be unreasonable and inappropriate to administer a three or four hour basic skills test battery twice a year if any of the students in that particular program joined because of a dislike for classroom-oriented activities.

### Coordination

A point often overlooked in selecting appropriate ways to obtain needed information is the amount and type of coordination required. This coordination includes the amount and type of interference that may accrue to students, staff, participating employers and others. It also includes the coordination of persons or agencies to be involved in the data collection for each strategy. One compromise the authors have used with the operations staff at the demonstration site in managing the coordination of different evaluation strategies was the agreement at the beginning of the school year as to the maximum total amount of direct time of students and staff that would be used in any type of evaluation. This agreement insured that the project's coordinator of research and evaluation would maintain close planning and monitoring of student and staff time used in evaluation.

### Efficiency

Although we have mentioned that credibility is enhanced when several evaluation approaches related to the same issue produce consistent findings, one has to weigh the relative value of redundancy of information collected on a few issues to establish the reliability of the findings versus loss from foregoing the collection of unique information about additional issues.

## MEASURING STUDENT OUTCOMES

One way of organizing and displaying the evaluation techniques to be used in evaluating EBCE outcomes is to prepare a matrix portraying learning outcomes and various evaluation strategies that will be used in assessing these outcomes. An example of such a matrix is shown on the following page. Student outcomes are listed among one dimension and evaluation instruments or sources of data are listed along the other dimension. This display demonstrates that some evaluation measures cover several outcome areas and conversely that a single outcome can be assessed by more than a single measure. Such a display is helpful also at report writing time since the evaluator can use it to relate the findings of various measures in reporting findings for a particular outcome.

## MATRIX OF OUTCOME GOALS AND EVALUATION MEASURES

** = primary measure*
*x = secondary measure*

| OUTCOME GOALS | CTBS Reading Subtest Scores | CTBS Arithmetic Subtest Scores | Self-Directed Search (SDS) | Psychosocial Maturity Scale (PSM) | Semantic Differential | Predesigned Projects | Individualized Projects | Student Interviews | Parent Opinion Survey | Employer Opinion Survey | Student Application Form | Staff Questionnaire | End-of-Year Student Questionnaire | Follow-Up Questionnaire for Graduates | LM Assessment of Student Projects | Exploration Packages | Student Performance Review | Student Evaluation of Learning Site | Competencies Certification | Student Resume | (CE)2 Experience Record | Student Attitude Questionnaire |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DIRECT OUTCOMES--Life Skills | | | | | | | | | | | | | | | | | | | | | | |
| A. Critical Thinking | | | | | | * | x | | | | | * | | | x | x | | | | | | x |
| B. Science | | | | | | * | x | | | | | | | | x | | | | | | x | |
| C. Personal-Social Development | | | | * | * | * | x | | x | x | | * | | | x | | x | x | | | | x |
| D. Functional Citizenship | | | | | | * | x | | | | | | | | x | | | | | | | x |
| E. Creative Development | | | | | | * | x | | | | | | | | x | | | | | | | x |
| F. Competencies | | | | | | | | | | | | | | | | | | | * | | | * |
| --Career Development | | | | | | | | | | | | | | | | | | | | | | |
| G. Aptitude, Interest & Ability, Knowledge | | | * | | x | | | | | | | * | | | | x | | | | | * | * |
| H. Social, Governmental & Economic Knowledge | | | | | | * | x | | | | | | * | | | x | | | x | | | |
| I. Job Application & Maintenance Skills | | | | | x | | | | | | * | * | | | | | * | | * | * | * | |
| J. Career Knowledge | | | x | | | | | | | | | | | x | | x | | | | | | * |
| --Basic Skills | | | | | | | | | | | | | | | | | | | | | | |
| K. Career Applied Basic Skills | x | x | | | | | | | | | | | | | | | x | | | * | | |
| L. Basic Skill Improvement | * | * | | | | | | | x | | | * | | | | | | | | x | | |
| M. Relationship of Careers with Basic Skills | | | x | | | | | | | | | | | | | x | | | | | * | |
| N. Willingness to Apply Basic Skills | | | | | | | | * | | | | | | | | | x | | | | * | |
| EXPERIENTIAL OUTCOMES | | | | | | | | | | | | | | | | | | | | | | |
| O. Broadening Range of Sources | | | | | x | x | * | * | | | | | | | | | | | | | | * |
| P. Adult-Oriented Personal Communication | | | x | * | | | | * | | x | | * | | | | | | | | | | x |
| Q. Increasing Self-Initiated Behavior | | | | * | x | | | * | | x | | * | | | x | | | | | | | |
| R. Increased Tolerance, Trust & Openness to Change | | | | * | | | | * | | | | | | | | | | | | | | |
| S. Sensory Input as Part of Decision Making | | | | | x | | | * | | | | | | | | | | | | | | |
| T. Preparation for Adult Responsibilities | | | | | | | | * | x | x | | * | | | | | * | | * | | | |
| U. Specific Job Skills | | | | | | | | x | | x | | * | | | | | | | | | | |

4?

## 12 Consider existing instruments that might be used

Two areas of EBCE outcomes where existing instruments may be useful are in measuring Basic Skills and Career Development. The Life Skills area of EBCE contains some objectives for which few if any standardized instruments exist.

### ADVANTAGES AND DISADVANTAGES

The use of standardized instruments in evaluating EBCE has potential advantages and disadvantages that need to be weighed by an evaluator and project staff. Some of the potential advantages are that standardized instruments usually have:

1. established research supporting their validity and reliability
2. norms that allow comparison of the performance of students with others around the country at the same grade level
3. curriculum-free content (thus making the instrument equally fair--or unfair--for EBCE and comparison group students)
4. general credibility with school board members and administrators who may be important audiences for the evaluation report

Some of the potential disadvantages of using standardized instruments are that:

1. some of the outcomes they measure may be less relevant to EBCE students and to real world performance needs
2. they fail to identify specific competencies that students have or have not achieved
3. they are often less sensitive to program effects over a short period of time (i.e., within a single school year)
4. the validity of their results is destroyed by changing individual test items or administration procedures
5. they may not be based on a norm group which is comparable to the students served by the project

## CONSULT REFERENCES

Before selecting a particular standardized instrument for use in EBCE, the evaluator may wish to read the review of the instrument in a general reference source (e.g., Buros[1]). The review of standardized instruments done by Research for Better Schools and the UCLA Center for the Study of Evaluation may be useful in deciding such factors as examinee appropriateness, normed excellence, teacher feedback, usability, and retest potential.[2] Many standardized career development instruments have been evaluated by a panel of measurement experts in career education.[3]

## SPECIAL CONSIDERATIONS IN SELECTING EXISTING INSTRUMENTS

### Has the instrument been used before in evaluating an EBCE Project?

If a particular test has been used in EBCE by one of the four regional laboratories responsible for development of EBCE models you might contact the laboratory involved to determine the rationale for its selection, any problems noted in its use or interpretation, and the nature of the evaluation findings.

### What instruments, if any, is the school district already using with high school students?

If a district is already administering (and plans to continue using in the future) a standardized Basic Skills achievement test to all high school students at the grade levels from which EBCE draws, you should consider the advantages of using that same instrument. If this instrument is administered near pretest or posttest time this would more easily allow for comparing results of EBCE and non-EBCE students. It would also be useful for students who might transfer into or out of EBCE during the course of the year.

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[1] *Buros, O. K. The Seventh Mental Measurement Yearbook. Highland Park, N. J.: The Gryphon Press, 1971.*

[2] *Hoepfner, R. et al. CSE-RBS Test Evaluations: Tests of Higher-Order Cognitive, Affective and Interpersonal Skills. Center for the Study of Evaluation, UCLA Ca. 1972.*

[3] *Young, M. B. and Schuh, R. G. Evaluation and Educational Decision Making. Washington, D.C.: Development Associates, Inc., 1975.*

### Are the assumptions underlying the instrument consistent with the EBCE philosophy?

An important consideration in selecting certain existing measures of career knowledge and attitudes is whether the assumptions underlying the instrument are consistent with the EBCE philosophy and practice. For example, some existing career maturity instruments have been developed for in-school programs rather than for experience-based programs operating in the community and thus assume that students should get much of their vocational information from the guidance counselor rather than from actually exploring careers in the community. Other assumptions behind existing career maturity instruments are that students should have a general knowledge about a variety of careers whereas the NWREL version of EBCE stresses the importance of students having a knowledge of careers that are of particular interest to them and match their attitudes and competencies.

### Is the instrument appropriate to students in EBCE?

It is also important to consider whether an existing instrument is appropriate for the reading level and maturity of the students for whom it is being considered. For example, the Self-Directed Search has been a problem for many poor readers in EBCE and for some students who have little knowledge of many of the job titles mentioned in the instrument.

### Can selected subtests of the instrument be used to give valid information while saving student time by not administering the entire battery?

Some standardized achievement test batteries require over three or four hours to complete. To conserve student testing time, the assessment of EBCE student growth in Basic Skills can be achieved by administering only selected subtests of a complete battery. For example, in using the Comprehensive Test of Basic Skills, it is possible to obtain useful growth measures related to EBCE by selecting only the Reading Comprehension, Arithmetic Concepts and Arithmetic Applications subtests.

### Is the instrument sex- or race-biased?

Producers of standardized tests have become very sensitive within the past few years to charges of sex and race bias in their instruments. It is important in considering a standardized test that the reviewer determine that the instrument is free of bias. This may be done by reading the actual items on the test and by reading the publisher's technical report to see what steps have been taken in the development of the instrument to insure that its use and the interpretation of its results will not be biased or stereotyped.[1]

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[1] *For an interesting discussion on issues of sex bias the reader may wish to read* ***Issues of Sex Bias and Sex Fairness in Career Interest Measurement*** *edited by Esther E. Diamond, Career Education Program, National Institute of Education, Spring 1975.*

## 13

Identify and develop other instruments needed

Standardized tests are not available for measuring most EBCE student outcomes. This leaves the evaluator with a choice of using existing non-standardized instruments or developing local instrumentation. The Reproducible Materials section of this handbook contains evaluation instruments developed by NWREL that address many of the NWREL EBCE student outcomes. A rationale and description of each instrument is also given in that section. Evaluators of NWREL EBCE projects are free to reproduce and use any or all of these instruments that fit their needs.

These NWREL-developed instruments are based on EBCE student or program outcomes and reflect experiences shared by the other three laboratories involved in developing EBCE, by the demonstration site in Tigard and by the NWREL pilot sites. They have been reviewed and approved by the NWREL Protection of Human Subjects committee and by the Office of Management and Budget in Washington, D.C. Their use will permit a local EBCE project to compare its results with those obtained from other districts using the NWREL version of EBCE. Districts wishing to use these instruments may contact NWREL for further information on their use and on future revisions that may be made. Such districts will be requested to furnish NWREL with a copy of their results.

To the extent that districts adapt the EBCE model to their local needs, new objectives or learning processes may be added which require additional evaluation instruments or modifications to those developed by NWREL. As an example, most sites have added or substituted some new student competencies for which valid certification procedures are needed. Others have used various individualized Basic Skills learning packages which already have or require their own competency-based tests.

The development of valid and reliable non-standardized instruments requires technical knowledge of instrument development procedures which can often be obtained through the use of short-term consultants in measurement. Such consultants need to work cooperatively with project staff who possess a good understanding of EBCE to insure that any instrument developed is consistent with the EBCE philosophy and is appropriate for the intended respondents.

## 14

Develop components of a comprehensive evaluation plan

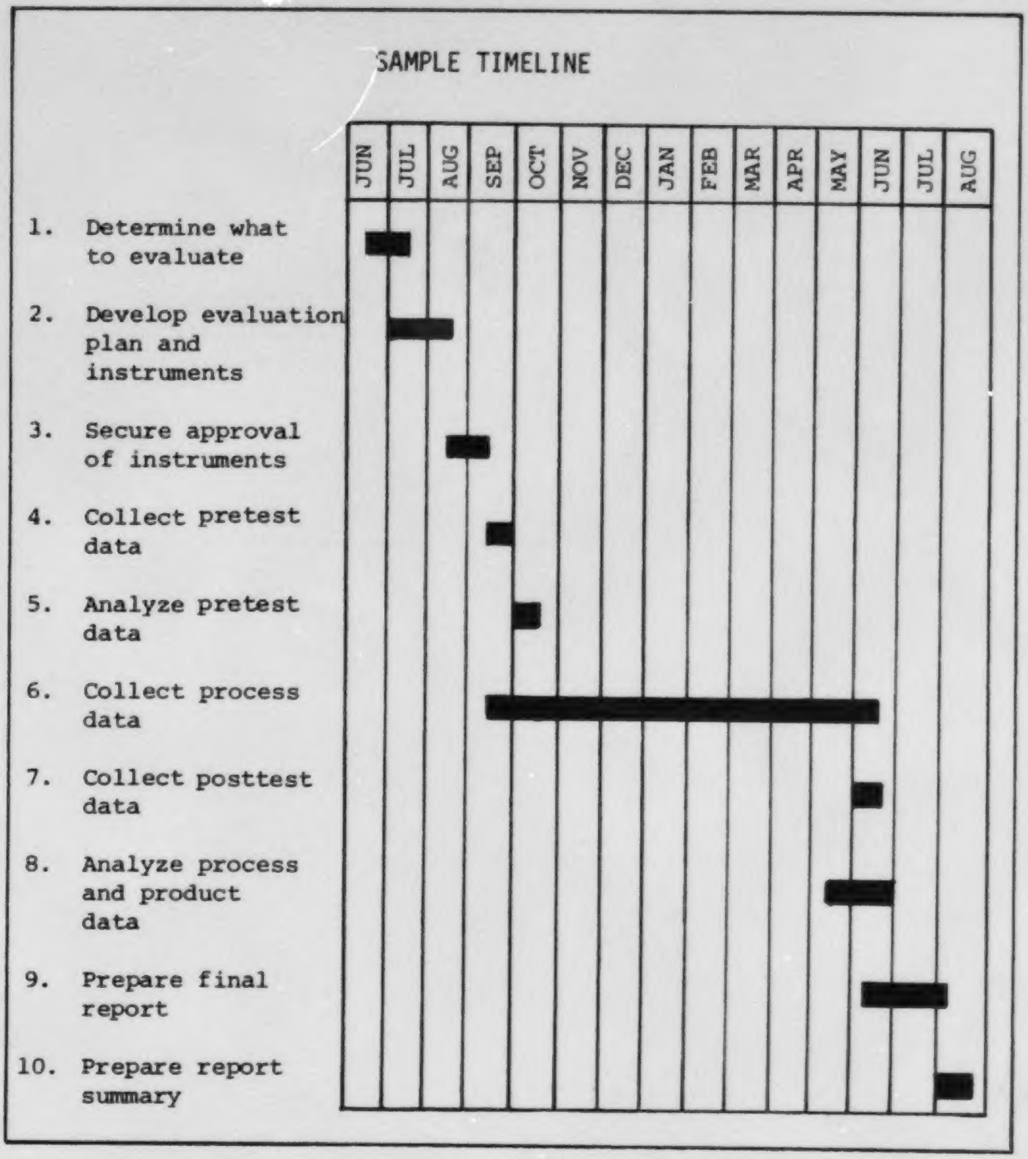
Successful completion of the preceding items in this section and those in the previous section will lay an excellent foundation for preparing an EBCE evaluation plan. Although an evaluation plan is often prepared for only one year at a time, it is useful in the first plan to include some general overview of the type of evaluation planned for the next several years of the program. In general, the first year of evaluation involves heavy emphasis on formative (process) evaluation with less attention given to a summative (outcome) evaluation. During the second and future years of EBCE (as the program begins to stabilize), less emphasis is placed on formative evaluation and more on summative evaluation.

In building a house, the preparation of a blueprint occurs after preliminary discussions regarding costs and the general needs that the house is to serve, but before the actual construction of the foundation and walls. In a similar way, the evaluation plan for EBCE should be prepared after preliminary policies have been established but before the data collection has begun.

### ELEMENTS OF A COMPREHENSIVE EVALUATION PLAN

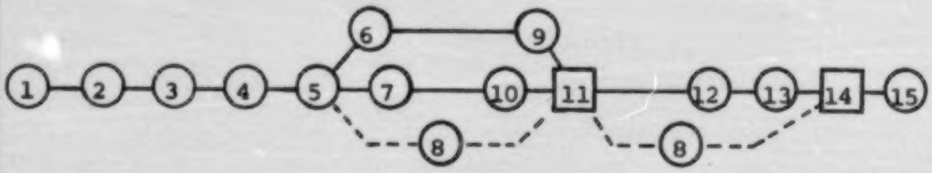
1. Purposes and audiences for the evaluation
2. Project objectives
3. Questions to be answered by the evaluation
4. Evaluation strategies to be used
5. Instruments to be obtained or developed
6. Assignment of evaluation roles and responsibilities between the evaluator and the project staff
7. Procedures for data collection, analysis and reporting
8. Timeline specification of what will be done by whom and when

Eight elements generally found in a comprehensive evaluation plan are shown in the box on the preceding page. The first six elements have already been discussed in this handbook. Procedures for data collection, analysis and reporting are covered in steps 16 to 23. A timeline can be developed as shown in the box below.



If a more detailed work plan is desired the evaluator may wish to develop a PERT (Program Evaluation and Review Technique) network as shown in the box below. An advantage of PERT is that it makes more clear the relationship among tasks, and identifies which tasks are dependent on the completion of a prior task and which tasks can be done concurrently. A task displayed on the same horizontal line can be accomplished only when the task to its immediate left has been performed. Dotted lines are used to show coordination of activities that are not necessarily dependent on each other. Circles indicate the scheduled completion date of each activity. The boxes indicate reports or information feedback.

### SAMPLE PERT NETWORK



Sample Tasks in the Network

1. Decide on the nature of the evaluation
2. Select internal or external evaluators
3. Determine what is to be evaluated
4. Develop an evaluation plan and instruments
5. Get the plan and instruments reviewed
6. Collect baseline data
7. Collect pretest data
8. Collect and analyze process data
9. Analyze baseline data
10. Analyze pretest data
11. Prepare interim report
12. Collect posttest and survey data
13. Analyze posttest and survey data
14. Prepare final report
15. Prepare report summary

## 15

## Submit the evaluation plan for review and ratification by appropriate persons

Since the preparation of a comprehensive evaluation design is the single most critical aspect of a good evaluation, it is worth allowing adequate time for its preparation. It is also useful to insure that the draft of the design is reviewed by the project staff, the project advisory committee, the district liaison person, and (if funds allow) by another evaluation specialist who could be asked to critique it. Once approved, the design can then be implemented, keeping in mind that unforseen changes still may create a need to revise it at a future time.

The NWREL EBCE evaluators have found that although the Project Director may be the only staff member who carefully reads the evaluation plan it is a useful idea for the evaluator or Project Director to review the general elements of the plan with the entire staff. This practice allows the staff to acquire an awareness of what is to be involved in the evaluation and of their participation in it.

# Conducting the Evaluation

*In steps 1 through 15 we have discussed the planning phase of an EBCE program evaluation. Procedures for actually conducting an EBCE evaluation are contained in steps 16 to 22.*

## 16

Obtain student baseline and monitoring data

In addition to student data collected as pretest and posttest information it is important to obtain student baseline and monitoring data. Baseline data, or information about students prior to their entry into EBCE, is useful in describing the extent to which EBCE student applicants represent a cross range of the total high school population from which the program draws.

Information already on file, such as aptitude or achievement test data administered to all high school students during the past few years can be obtained for students in EBCE and compared to a random sample (or to the total population) of high school students from which EBCE volunteers came. The grade point average (GPA) and number of days absent for the school year prior to entering EBCE can also be obtained for students in the program. In addition to providing a background description of the EBCE student population, the prior year's attendance data can be used to compare with the attendance data of the same students during their first year in the program. This comparison assumes that student attendance is an indirect indicator of student attitude toward participating in EBCE.

Even before EBCE pretesting occurs on students beginning a program year, initial student monitoring data should be collected. Student monitoring data refer to descriptive data about each EBCE student and a record of his or her attendance and specific accomplishments in EBCE throughout the school year. A list or roster of prospective students along with their sex and grade level status should be prepared. (See Student Services handbook, pages 7-26.) This list forms the basis for recording and monitoring subsequent student progress.

At recruitment or pretest time students complete an application questionnaire which provides additional student background data such as birthdate, reasons for entering the EBCE program and baseline data on occupational interests and experience. Additional information will be obtained for local internal use only, such as address, telephone number and a parental agreement for the student's participation in the program and its evaluation activities.

Other baseline information is collected in the curriculum areas of Basic Skills, Life Skills and Career Development. As the year progresses a record is kept of student progress in such areas as numbers of explorations, learning levels, skill building activities, projects and competencies completed per student, and the number of days absent. In addition, the type or name of each project and competency should be reported.

During the course of the year new students will enter the program and need to be added to the roster along with their appropriate background, testing and accomplishment information. Students will also leave the program, either voluntarily or due to non-participation. Their information should be deleted from the evaluation record (since they will have incomplete test data) and their names removed from the roster.

*CROSS-REFERENCE*

*The gathering of baseline assessment data for use in designing individual student learning plans is detailed in Item 3 of "Learning Plan Negotiation" in the* Curriculum & Instruction *handbook, pages 54-62.*

## 17

Plan and administer pretests

### WHEN TO PRETEST

Instruments used to estimate growth in specific EBCE areas should be administered on two or more occasions--preferably as students begin EBCE (pretesting) and again near the end of each year in the program (posttesting).

An ideal time to administer the pretest is shortly before the students actually begin interacting with the formal elements of the program. Since students are expected to become immersed almost immediately in EBCE, an ideal pretest time is about three weeks before program start-up for a new school year. Several sites have pretested in August so they could gain information on students' career interests and Basic Skills performance level for use when students begin program activities in September. Because all students might not be able to complete their testing at this time due to work, vacations or travel, make-up sessions should be planned to occur shortly after the beginning of the school year.

A second alternative is to test all students soon after the program begins. This, however, can create several problems. First, full-scaled testing during opening weeks can unduly complicate the program's calendar, which will already be quite full with orientation and other start-up activities. Second, EBCE is an alternative to the regular school program and its uniqueness might appear diluted by starting the term with standardized testing similar to that in a regular high school program. Finally, but most importantly, EBCE is an individualized program that attempts to match student abilities, interests and attitudes with projects and career explorations. It requires a thorough student assessment in the areas of Basic Skills, Life Skills and Career Development. Although this assessment should be ongoing, it is critical that it exist quite early in the program. Delays in pretest administration plus the time necessary for scoring and reporting of data will delay full program implementation. For example, if pretesting is done during the first week of the program, data coding is done during the second week, and several weeks are allowed for scoring and reporting of information, staff and student use of individual assessment data might be delayed until the fifth week of the program.

A third alternative is to pretest all EBCE applicants in the late spring prior to their entry into the program the following fall. This alternative has the advantage of allowing adequate time for scoring and processing student scores prior to active student involvement in EBCE.

Potential drawbacks to this alternative are that some students, over the summer, may change their minds about entering or not entering EBCE and thus some new students may still need to be tested in the fall. A second drawback is that it then becomes difficult to separate out the major EBCE program effects from those resulting from experiences such as summer jobs.

## POINTS TO KEEP IN MIND WHEN TESTING

### Explain your Purposes

Be sure to tell students why you are testing and encourage them to do their best. The primary purposes for EBCE pretesting are-- 1) baseline data are necessary so that individual project negotiation, employer site placement and student counseling can be accomplished properly, and 2) student growth needs to be assessed to see how well the project is achieving its objectives.

### Environment and Other Considerations

Test administration should be uniform for all groups of students tested. Directions for administering each of the evaluation instruments should be studied by the testers prior to the day of testing since these may affect the size of the group to be tested at one time, room conditions or the need for special materials (such as stop watch, if a timed test is being used).

The testing location should be well lighted and have adequate ventilation. There should be sufficient testing space for each student, both for comfort and to minimize the possibilities of copying. Different levels of the same test may be needed if prior data indicate a very wide range of student abilities. The timing of testing sessions, where appropriate, should be strictly followed. Each student should have a sharpened No. 2 lead pencil which is required when Digitek or other machine-readable answer sheets are used. It is a good idea to provide these sharpened pencils and collect them with the test booklet and answer sheets. Extra pencils should be available for use if needed.

Careful monitoring during the testing period is necessary, especially when special answer sheets are being used. It is important that students understand how and where to mark answers since only portions of some answer sheets are used and there are wide format differences among answer sheets. During this time the examiner can also check to see that the correct pencils are being used since marks made in ink are not readable by machine.

When students complete the tests, examine them immediately for missing sections, multiple responses and lack of identification. In this way the difficult problem of going back to the students to match up or correct answer sheets can be avoided.

## Follow-up

Immediately after student testing it is useful for the test administrator to write down any irregularities that have occurred during the testing period. This information is useful in helping to interpret unusual results. Scoring and coding of evaluation instruments should begin as soon as possible after the instruments are administered. This minimizes loss of data and insures quicker availability of pretest results.

### *CROSS-REFERENCES*

*Specific directions for administering NWREL-developed instruments are given in Appendix B.*

## 18

## Collect process and survey data

"Process data" refers to data that can be collected periodically throughout the year to monitor the direction of the EBCE program and the progress being achieved by students. "Survey data" consists of interviews or questionnaires that have been developed to assess the opinions of students, parents, staff or community people associated with EBCE.

Two instruments have been developed by the NWREL EBCE evaluation staff to assess the program processes being utilized and to determine the degree of fidelity of the replicated program to the NWREL EBCE model: the NWREL EBCE Process Checklist and the NWREL EBCE Essential Characteristics Checklist.[1]

These instruments were developed by NWREL to--

1. provide descriptive information to NWREL staff on local program characteristics and the degree of fidelity of the local model to the NWREL EBCE model
2. estimate program drift in essential program features and processes over a period of time

Local project staff can use the results of these two instruments to--

1. gain feedback on the extent to which they are implementing the EBCE model
2. identify any operational areas they may wish to change in order to meet original expectations
3. document local deviations from the EBCE model

Both instruments should be completed by the project director and evaluator from two to four months into the program year after the program has had a chance to stabilize. Administration at an earlier date would result in information more subject to change as the implementation adapts to local constraints or demands. Later administration would delay providing feedback to the local staff concerning discrepancies between their model and the NWREL EBCE model.

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[1] *A brief description and a copy of each instrument is located in the Reproducible Materials Section of this handbook.*

Both instruments can again be administered about a month or two before the end of the year to assess the amount, if any, of program drift during the year when compared with the first administration results. Such administration should occur prior to posttesting and before the end-of-the-year push begins.

Student progress data such as the number of competencies, projects, journal entries, explorations and learning levels completed by each student are generally collected by the operations staff at the end of each of eight to ten school year action zones throughout the year. The program evaluator may wish to summarize the progress of the total group of EBCE students on completing these activities on a zone-by-zone basis or at the end of each semester.

The NWREL EBCE evaluation staff have found it useful to collect survey questionnaire data from parents and community members associated with EBCE around March or April of each year. This timing allows a period for follow-up reminders to members of these groups if the initial response rates are low. It also decreases the number of activities needing to be completed at the very end of the school year. It has been useful to collect questionnaire data from students and staff during the last month of the school year since many students become even more active in the program during the last part of the school year.

## *CROSS-REFERENCES*

*The uses for the student progress or monitoring data are described on page 64 of this handbook.*

## 19

## Plan and administer posttests

The term "posttest" is used here to refer to evaluation instruments administered to students after some specified period of time during which they participate in EBCE. Because student participation in EBCE can be designed to last from one semester to several years it may not always occur at the end of a program year, although that occurs most frequently. Since students tend to become restless during the last few weeks of the school year and many are working extra hard to complete project assignments necessary for graduation or end-of-year promotion, it is recommended that students be tested approximately three to four weeks before the end of the program year. This will also provide time for makeup testing sessions where necessary.

All growth-related instrumentation administered at pretest time should be administered again at the end of the year to evaluate changes that occurred over the course of a student's participation in the program. In addition, use this posttest time to collect data which would have been inappropriate to measure at pretest time (e.g., student attitudes toward the program and staff, future plans or hindsight comparisons with the traditional high school programs). End-of-year questionnaire data are essential to collect from both students and staff. Therefore, this posttesting session is likely to take slightly more time than did the pretest.

When administering the posttest all of the precautions indicated under pretesting (step 17) should be repeated. It should not be assumed that a test administrator will remember all of the procedures to follow or that students will understand the purposes for the testing.

## 20

## Score and/or code data

The evaluator of an EBCE project needs to decide whether project data are to be scored and/or coded within the district or contracted to a person or agency outside of the district. If the data are scored or coded within the district a decision is needed as to whether it will be done manually or by machine.

The decision whether to contract with a person or agency outside the district for scoring and coding services is influenced by factors such as:

- The availability of trained personnel within the district to provide these services
- The availability of necessary machine scoring facilities within the district
- The availability of funds for an outside contract
- The costs of either service
- The accuracy likely under either service

A decision as to whether instruments should be scored manually or by machine is influenced by factors such as:

- The number of instruments to be scored
- The availability of trained personnel, equipment and programs for scoring the instruments
- The turn-around time of either system
- The costs of either system

## 21 Analyze the data

The analysis of EBCE data can be a time consuming activity. As was true under step 19, the evaluator of an EBCE project needs to decide whether project data are to be analyzed within or outside of the district and whether or not the analysis will be done by computer. The same factors influencing the decisions in step 19 are applicable here also.

Discussions of specific statistical analysis is beyond the scope of this handbook. Instruments administered as pre- and posttests have generally been analyzed by the NWREL EBCE evaluation staff using a multivariate analysis of covariance, with the posttest scores serving as dependent outcome variables and pretest scores as covariates. The MULTIVARIANCE package by J. Finn has been found very appropriate for such analysis.[1]

Survey instruments such as the Student End-of-Year Questionnaire, Parent Opinion Survey, Employer Opinion Survey and Staff Questionnaire have been analyzed at NWREL using the CROSSTABS program from the Statistical Package for the Social Sciences (SPSS).[2] This program is convenient for analyzing data across several groups such as for first year and second year program participants.

In deciding on the types of analysis to use, it is important to keep in mind the level of the audience for whom the evaluation reports will be addressed.

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[1] *Finn, J. MULTIVARIANCE: A generalized univariate and multivariate analysis of variance, covariance, and regression. Version V. Chicago: National Educational Resources, Inc., March, 1972.*

[2] *Nie, N. et. al. SPSS Statistical Package for the Social Sciences. Second Edition, New York: McGraw-Hill Book Co., 1975.*

## 22

## Report the evaluation findings

In reporting evaluation findings it is useful to review what questions each audience has about the topic to be reported. By keeping the audience in mind, the evaluator can better determine when to give the report, the level of presentation and appropriate methods of reporting.

### Timing

The timing of evaluation information reporting is important for both oral and written reports. In EBCE the reporting to students and parents occurs frequently and systematically throughout the year. Use of the school year action zone provides feedback on the level of progress expected of each student by the end of specified calendar periods. Other examples of timely feedback to students occur when the learning manager meets with a student to review a recently completed project or when a community member certifies whether or not a student has successfully demonstrated completion of a specific competency.

At the program level, timely feedback can occur informally when a staff member calls a participating employer promptly to discuss a problem mentioned by a student while at that site, when an evaluator provides the draft of a special report to the staff which will be used in planning for the next employer seminar, or when an evaluator discusses an interim evaluation report with staff for their use while preparing a continuation proposal for the following year. Interim reports are also useful to funding agencies if the decision regarding the continued funding of a project must be made prior to the availability of a completed end-of-year evaluation report.

### Level of Specificity

The question of how detailed or specific to make a report also relates to an understanding of an audience. If the report is to be given about an individual student, both parents and students are usually interested in specifics. If the report contains data for an entire group, it may be best simply to summarize it and place the details in an appendix. The same data may be reported to various audiences at various levels of specificity. For example, a complete evaluation report may describe the instruments used to measure each particular objective, the student population or sample, procedures used to analyze the data, the statistical findings and a discussion of the findings related to each objective. Project staff may be interested primarily in the findings and a discussion of how they could be used to improve the program. Parents or community persons may be interested in a single sentence summarizing how students performed on a particular objective.

### Reporting Methods

Evaluation findings may be reported by one or several methods including oral, written, or multi-media presentations. For example, a report to a school board may be a complete written report. However, if only 20 minutes of board time were allowed for a presentation, the evaluator might wish to summarize the findings orally and show some tables or graphs on an overhead projector that highlight the main findings. The evaluator may wish to share some recommendations orally with the board in order to get their reactions.

## THIRD PARTY EVALUATION REPORTING

Third party evaluators, or those contracted from outside of a district to conduct an independent evaluation of an EBCE project, should be guided by the needs of the project staff, the school district and those of the funding agency. While the needs of the project staff and school districts will vary from district to district, the guidelines from all funding sources (including USOE Part D, Vocational Education Act[1]) should be reviewed carefully. Guidelines written specifically for judging the "third party objective evaluation" part of the proposals seem also appropriate to consider when recalling information to be reported.

A helpful practice used by some third party evaluators is to give an informal oral report to the project staff at one or more times during the course of the year and to give them a draft of the end of the year evaluation report in time to react to it and challenge any factual errors or omissions. This latter process allows the evaluator to make any factual corrections in the final version of the report before it gets submitted to the district or funding agency. The operations staff may still not agree with the interpretation of the findings or recommendations made by the evaluator but there should be agreement on the factual data.

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[1] *Guidelines for those receiving Part D funds are available: Exemplary Projects in Vocational Education, Criteria for Selection of Applicants for FY 1976.* Federal Register, *Vol. 40, No. 220, November 13, 1976, pages 52962-52965.*

Some evaluators allow the operations staff to write an appendix section to the report in which the staff summarize their interpretations of the findings and their recommendations in cases where they differ from those of the evaluator. This process maintains the objectivity of the evaluator while allowing the district and the funding agency to read a different interpretation of the findings when such differences occur.

### *CROSS-REFERENCE*

*Pages 66-69 of the EBCE Curriclum & Instruction handbook describe how the school year action zones operate.*

# Using Evaluation Findings

*In steps 16 to 22 we have discussed tasks involved in conducting a program evaluation. Procedures for using evaluation findings are contained in steps 23 to 25.*

## 23

Use student pretest data

Student pretest data can be useful at both the individual student level and at a group summary level. In 1976-77 the following background and pretest data were collected by the EBCE pilot sites:

1. student file data including recent achievement test data, GPA and attendance records from the year prior to entering EBCE
2. responses from the EBCE Student Application/Background Questionnaire
3. results from the reading comprehension and arithmetic subtests of the Comprehensive Test of Basic Skills
4. Student Attitude Questionnaire responses
5. EBCE Semantic Differential responses

Some sites are also using the Self Directed Search as a pretest.

### STUDENT FILE DATA

At the individual student level, the student file data can give the EBCE project staff an indication of each student's academic achievement and general school performance as reflected in the GPA and attendance. This knowledge is useful, for example, when the learning manager begins to plan student projects with a student. The attendance rate is also useful as a comparison measure with student attendance while in EBCE.

## STUDENT APPLICATION/BACKGROUND QUESTIONNAIRE

The EBCE Student Application/Background Questionnaire contains much information that can be useful to EBCE staff in understanding a particular student. Information is provided in areas such as family background, reasons for entering EBCE, the student's previous employment history, short- and long-range educational and work goals, recent involvement in high school and community activities, hobbies, and reading habits. Some of these areas such as student's educational and work goals are repeated on the Student End-of-Year Questionnaire as a means of determining changes over the year.

## COMPREHENSIVE TEST OF BASIC SKILLS (CTBS)

The reading comprehension, arithmetic applications and concepts subtests of the CTBS are administered by many EBCE projects as pre- and posttest instruments to measure student growth in Basic Skills. Project staff have found the pretest scores useful in determining which students may need diagnostic testing to determine specific areas needing intensive work in Basic Skills and in judging the level of Basic Skills activities to be incorporated into students' individually negotiated projects.

## STUDENT ATTITUDE QUESTIONNAIRE

The Student Attitude Questionnaire is being used for the first time in EBCE during the 1976-77 school year. This instrument contains items intended to reflect short term growth on the part of EBCE students that will exceed growth made by comparison or control group students. This instrument contains four sections: the New Mexico Career Oriented Activities checklist developed by Educational Evaluation Associates, the School Opinion Scales developed by Far West Laboratory, and two sections developed by NWREL--a Life Skills Attitudes Scale and a Competencies Scale. The New Mexico Career Oriented Activities checklist is part of the New Mexico Career Education Test Series. On this 25-item subtest students select responses that reflect career oriented activities. For example, students check whether, during the past year, they "found out the occupations people with interests like mine enter" or "learned which training programs are open to me and which ones interest me." The next two subtests contain items with a five-point rating scale ranging from "strongly agree" to "strongly disagree." Items assess attitudes toward decision making, school, peers, staff and the Life Skills areas. The final scale contains a number of competencies and the student checks yes or no as to whether he or she has already completed a particular competency.

Pretest results from this instrument can be especially useful to project staff in counseling students who have done few or no career related activities in the past and those who have a particularly negative attitude toward peers, staff or the Life Skills areas.

## SEMANTIC DIFFERENTIAL

The Semantic Differential measures student attitudes toward the concepts of me, school, adults, learning and work with each concept rated on a five-point scale for 15 polar adjectives. Thus each concept can have a score of from 15 to 75. Project staff may wish to identify and counsel with students having a particularly negative attitude toward any one of these areas on the pretest.

## THE SELF-DIRECTED SEARCH

Although the Self-Directed Search, developed by John Holland, has not proven particularly useful in EBCE as an evaluative instrument for measuring student growth over a one-year period in career development, it can have value to program staff as a pretest instrument.

The Self-Directed Search (SDS) provides the student and staff with a picture of the career areas that are of high or low interest to a particular student.[1] Such information is often used by EBCE staff in selecting some job sites for that student's initial career explorations. A consistency and differentiation score are also provided for each student. The consistency score is a measure of the correspondence of a student's primary and secondary occupational preferences with Holland's Theory of Careers. The differentiation score reveals the degree to which a student can differentiate between his or her high and low interests. A particularly low score on any of these measures can often signal the need for the staff to give that student special career and personal guidance.

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[1] *For a further description of the six SDS occupational/personality codes developed by Holland and the consistency and differentiation scores of the SDS see pages C-6 and 7 of the Appendix to the FY 75 Final Evaluation Report of the NWREL Experience-Based Career Education Program. For further discussion of help an EBCE staff member may be able to give a student with a low score in these areas, please see John Holland's paperback entitled Making Vocational Choices: A Theory of Careers (Prentice-Hall, Inc., 1973).*

Information described so far in this section deals with the use of individual student pretest data. A group summary of pretest and background data can also serve the useful purpose of describing the characteristics of the students that applied for and entered EBCE. If similar background data are available from a random cross sample of the total high school population from which the EBCE students came, a comparative description can be made to determine the extent to which the EBCE students are the same as or different from those not entering EBCE. This comparison can be important in determining whether EBCE is drawing students with a total range of student abilities or whether it may be appealing primarily to a special segment of the student population such as those of lower academic ability. In addition to such comparisons, EBCE staff should look closely at the range and standard deviations of pretest and baseline data to determine the amount of variation of students' abilities and background experiences. If the scores vary widely across students it becomes essential for the program to be able to deal with widely different student interests and abilities.

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## Use student monitoring data

As a result of a problem noted during the first several years of EBCE operation, the demonstration site staff felt a need to monitor student progress in EBCE in a systematic way, at frequent intervals throughout the school year, to insure that students were progressing adequately in their project requirements. A school year action zone system was initiated that made clear the level of progress expected of students at each of the zones throughout the school year. Midway through each zone the staff holds a zone progress meeting to discuss the progress of each student and what help may be needed by students. At the end of each zone a debriefing is held with each student and a report given to his or her parents dealing with the student's progress in completing competencies, projects, journals, explorations, learning levels, and in meeting target dates. This evaluation feedback to parents and students is considered an essential way to help students keep on schedule in EBCE. At a group level, these monitoring data are useful to allow the project staff throughout the year to determine if they may be overemphasizing one aspect of the program, such as the exploration levels, while underemphasizing other areas, such as the competencies.

*CROSS-REFERENCE*

*Pages 66-69 of the EBCE Curriculum & Instruction handbook contain more specific information on the way in which the action zones are operated.*

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## Use program evaluation data

In addition to the focus on student outcomes, an effective program evaluation should also look at areas of project management and operations where evaluation information may be useful in guiding possible changes or modifications in the operations of the program. The NWREL EBCE evaluation unit has developed two checklists--one dealing with EBCE essential characteristics and the other with EBCE processes--to help identify the extent to which an EBCE site is operating in a manner consistent with or different from the EBCE operational model. These checklists provide for a self-description of any deviations that occur and a reason for these deviations.

Project staff have found these two EBCE checklists useful as a tool in reviewing an EBCE project proposal to insure that they have addressed each of the essential elements of Experience-Based Career Education. After the project is implemented for several months, some staff have found the two instruments a useful check to determine if they have inadvertently omitted or underemphasized certain areas of EBCE in their haste to get underway with students. The Essential Characteristics Checklist has caused several project directors to recognize that they may have been neglecting areas such as systematic training of community resource people.

Some of the NWREL EBCE pilot sites have held staff meetings to review the evaluation findings from the prior year. Such reviews have sometimes allowed staff to get a more generalized perspective of changes occurring in students. Often the data confirm hunches held by project staff based on their daily interaction with the program. At other times, anonymous questionnaire results may uncover either positive or negative feelings that students, parents or employers may not have expressed directly to the project staff.

A review of areas in which students failed to demonstrate significant growth and of perceived weaknesses identified by student, parent, employer and staff questionnaires can be useful in providing direction for program modification. A review of evaluation findings at one pilot site led to a staff decision to encourage students to use a broader variety of resources in completing their projects, to locate and use student materials that related to applied mathematics, and to complete student competency packages that will help guide students in mastering the program's competencies.

A review of program evaluation data can also lead to a decision to change the evaluation instruments to be used the following year. Experience from the 1975-76 school year caused the NWREL EBCE evaluation staff to develop and recommend the Student Attitude

Questionnaire as a more sensitive growth measure for EBCE sites than the Psychosocial Maturity Scale or the Self-Directed Search.

In summary, evaluation data can be used to provide feedback on a student's progress, to identify areas for program modification and to improve the evaluation in future years.

### *CROSS-REFERENCE*

*The EBCE Essential Characteristics Checklist and EBCE Process Checklist have been described on page 52 of this handbook. A copy of these two instruments is located in the Reproducible Materials Section of this handbook.*

# APPENDICES

# APPENDIX A

## TECHNICAL INFORMATION ON ORDERING EVALUATION INSTRUMENTS

Information contained in this appendix will be useful as a resource to persons wishing to order evaluation instruments previously found appropriate for use in evaluating NWREL EBCE programs.

The addresses and costs listed below are those available to NWREL as of December, 1976. Prices are subject to change by the publishers.

### CTBS, Level 4, Form S

Publisher: CTB/McGraw-Hill
Del Monte Research Park
Monterey, California 94930
(408) 649-8400

| Answer Sheet No. | Code No. | Title | Cost | Quantity |
|---|---|---|---|---|
| | 80913 | Specimen Set | $ 3.00 | 11 |
| | 10957 | Complete battery test books (Includes 1 Examiner's Manual) | 19.95 | 35 |
| | 10959 | Partial battery test books (Excludes science and social studies) | 18.20 | 35 |
| | 10923 | Reading and References Skills Test (books only) | 9.45 | 35 |
| 6901 | 75901 | Reading and References Skills Digitek Answer Sheets | 4.50 | 50 |
| 6902 | 75902 | Language Digitek Answer Sheets | 4.50 | 50 |
| 6903 | 75903 | Mathematics Digitek Answer Sheets | 4.50 | 50 |
| 6904 | 75904 | Science and Social Studies Digitek Answer Sheets | 4.50 | 50 |

Other costs are available by writing the CTB/McGraw-Hill Company.

### Psychosocial Maturity Scale

Publisher: Dr. Ellen Greenberger
Program in Social Ecology
University of California at Irvine
Irvine, California 92717

This instrument is undergoing revision and an administration and technical manual is being prepared by Dr. Greenberger. Information about the current status and cost of this instrument is available from the test author. The social adequacy scale of this instrument may be most suited to EBCE outcomes.

## Student Attitude Questionnaire

Publisher: Office of Dissemination and Marketing
Northwest Regional Educational Laboratory
710 S.W. Second Avenue
Portland, Oregon 97204
(503) 248-6951

This instrument is available at a price of $.50 per student copy. It uses the OpScan standard answer sheets (DS1120-C). These forms are available for $15.00 per thousand from

Precision Business Forms
120 West 155th Street
Gardena, California 90248

## Self Directed Search

Publisher: Consulting Psychologists Press
577 College Avenue
Palo Alto, California 94306

| | Cost | Quantity |
|---|---|---|
| Self Directed Search Instrument (consumable) | $30.00 | 50 |
| Occupations Finder (not consumable) | 5.50 | 25 |

# APPENDIX B

## DIRECTIONS FOR ADMINISTERING EVALUATION INSTRUMENTS

When administering standardized test instruments it is very important that test administration procedures are followed explicitly. The normative data for such instrumentation which was gathered under standardized administration procedures is not appropriate for students completing the testing under different administration procedures. An extreme example might involve allowing students unlimited time to take a test which was intended to have a restricted test time period. The resultant scores would normally be higher than appropriate for the testing group and the normative data would be meaningless.

EBCE programs are less dependent on normative data and much more dependent on estimating student growth during the program. In many instances, the growth of EBCE students is compared to the growth of some competing program or control group of students. Unless all students are tested under the same testing conditions with the same directions, these comparisons are meaningless. Likewise, if students are pretested at the beginning of the program with one set of administration procedures and then posttested at the end of the program year with a different set, one would expect differences in the scores due to these changes in administration procedures alone. Thus, such differences become confused with the real differences due to the actual effect of the program itself.

The remainder of this document details the administrative procedures for selected instrumentation used in the EBCE program. These instruments include: Comprehensive Test of Basic Skills, Student Opinion Survey, Student Attitude Questionnaire, Student Application/Background Questionnaire, NWREL Semantic Differential and Student End-of-Year Questionnaire. These administrative procedures should be followed explicitly for each administration of these instruments, even if they are highly redundant for most of the students being tested.

If several instruments are being administered, the testing schedule on the next page is suggested. Note that the most highly standardized and timed instruments are administered first. Additional instruments can then be completed by students on an individual basis, if necessary. The indicated times are based on our experiences over the past few years and include time for explaining directions. If the entire CTBS is being administered rather than only the three subtests we have selected, the testing period will have to cover several days.

## Suggested Testing Schedule

| | | Required Time (minutes) |
|---|---|---|
| 1. | CTBS Reading Comprehension<br>(35 minute timed test) | 40 |
| 2. | Stretch break | 2 |
| 3. | CTBS Mathematics Concepts and Applications<br>(30 minute timed test) | 35 |
| 4. | Conversational break | 5 |
| 5. | Student Attitude Questionnaire | |
| | Section I (20 minute timed test) | 25 |
| | Sections II-IV | 25 |
| 6. | Stretch break | 3 |
| 7. | Relaxation or luncheon break | 10 |
| 8. | Student Application/Background Questionnaire | 15 } |
| | -or- Student End-of-Year Questionnaire | 35 |
| 9. | Student Opinion Survey | 20 |
| 10. | NWREL EBCE Semantic Differential | 15 |
| | Total Pretest Time (3 hrs. 15 min.) | 195 minutes |
| | Total Posttest Time (3 hrs. 35 min.) | 215 minutes |

Note that it takes 2¼ hours to complete steps 1-6, with 1¼ hours or less to be completed after this point. Thus, step 7 is an ideal place to discontinue testing for lunch with the remainder of the testing to be completed in the afternoon after lunch. In this way, all of the instrumentation requiring timed subtests and/or special answer sheets is completed before the major break period. The remaining instrumentation requires less rigid administration procedures.

## Comprehensive Test of Basic Skills (CTBS)

The CTBS is a highly standardized instrument with timed subtests. The administration procedures for this instrument are thoroughly described and must be followed explicitly. When administering this instrument the tester(s) must have a copy of the correct CTBS Examiner's Manual. For Level 4, Form S of the CTBS this manual is document CTBS-EX-4-S-MAN.

Testers should preview the testing process by reading the section on "Description of the Tests" on pages 2-5 of the Examiner's Manual. This section provides the reader with an overview of the total test.

Each tester should become thoroughly familiar with "Part 2. Preparation for Administering CTBS/S" on pages 7 to 12.* These general instructions should be followed carefully with the following changes. If only the Reading Comprehension and Mathematics Concepts and Applications subtests are being administered, as recommended by the NWREL evaluation staff, these subtests may be administered during one testing session. These subtests were selected to minimize testing time while maximizing the potential for obtaining student growth data. Thus, it is suggested that the Reading Comprehension subtest be administered first, followed by a two-minute "stretch" break and concluding with the administration of the Mathematics Concepts and Applications subtests. If the entire CTBS is being administered, the testing schedule suggested on page 9 would be more appropriate. All of the other "Special Considerations" listed on page 7 should be followed whenever possible regardless of which subtests are being administered.

On the right hand side of page 7 there is a list of eight additional considerations which should be followed during testing. Point #7 is extremely important as your role must be confined to that of a test administrator and not include that of a teacher. This point is important even after the testing is completed since any test-related coaching may affect student performance on future tests. The "Testing Cautions" listed on pages 8 to 11 further detail potential pitfalls during the testing procedure. The general plan for administering any subtest of the CTBS is given on page 12.

The answer sheets suggested for use with the CTBS are the Digitek answer sheets #6901-6904 as described on page 10. The Language answer sheet (#6902), unlike the other answer sheets, has two printed sides. If any of these subtests (Spelling, Language Mechanics or Language Expression) are being administered, side 2 of this answer sheet must be used for Levels 3 and 4. Also, the answer blanks for item #41 on the Science subtest and item #40 on the Social Studies subtest are not used since Level 4 has only 40 and 39 items, respectively, on these subtests.

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**All page references in this CTBS description are to the Examiner's Manual (CTBS-EX-4-S-MAN).*

## Special Directions for Digitek Answer Sheets

If any of the Digitek answer sheets (#6901-6904) are being used, the directions below must be followed. If the Student Attitude Questionnaire is not being administered the additional directions must also be followed. (If this is the first CTBS answer sheet being used, give the following directions. Otherwise, skip to the instructions labelled "[**].")

SAY: *At all times during this test you are to use a #2 lead pencil. Now, turn your answer sheet sideways so that the top of the answer sheet is at the right side.* [DEMONSTRATE] *Print* (location name) *where it says "school",* (program name) *where it says "teacher"* [PAUSE] *and* (today's date) *where it says "test date."* [PAUSE]

SAY: *Now, print your last name in the boxes above the letter grids, followed by your first name and middle initial. Make sure your first name and middle initial begin in the appropriate spaces and that your first name does not exceed six letters. For example, if your first name is Elizabeth, you would print ELIZAB followed by your middle initial. Are there any questions?* [PAUSE]

SAY: *Now, blacken the space to the right of the 4 in the box labelled "LEVEL"* [PAUSE] *and the space to the right of the S in the box labelled "FORM."*

[If the Student Attitude Questionnaire is not being administered also use the following special directions. Otherwise, begin with the actual test directions.]

SAY: *Now, blacken the appropriate letter box below each letter of your name. Use an oval motion of the pencil making sure the mark does not touch an adjoining box.* [Demonstrate by illustrating the correct method which should result in the following mark. [ ][●][ ] Emphasize that the mark should be large enough to almost fill the space from left to right but not so large as to touch an adjoining letter space. PAUSE.]

SAY: *Next, blacken the appropriate number space indicating your grade level in the section labelled "Grade." Use the same oval motion of the pencil.* [PAUSE] *Now, print the last two digits of the year of your birth in the box below the section labelled "Year" under "Birthdate." If you were born in 1960, you would enter "60." Then, blacken the appropriate month and year spaces, again using an oval motion of the pencil.* [PAUSE] *Finally, print your sex as "M" for male or "F" for female and blacken the appropriate letter space under* *the section labelled "Sex." Are there any questions?* [Begin with the actual test directions.]

[**]

SAY: *Turn your answer sheet sideways and print* (location name) *after "school,"* (program name) *after "teacher" and* (today's date) *after "test date" as you did on the previous answer sheet(s). Be sure you are using a #2 lead pencil.* [PAUSE] *Now, print your name, last name first, as you did before in the appropriate boxes. You do not have to complete any other information. Any questions?* [PAUSE. Begin with the actual test directions.]

[***NOTE: When filling in answer blanks the oval motion is not necessary as the boxes are sufficiently separated on the answer sheet.]

The general directions for administering the CTBS begin on page 13.* Each tester should be totally familiar with these directions. When administering the test, read aloud each of the comments prefaced by "SAY:" following the directions in the colored boxes on pages 12 and 13. Then, before beginning each subtest, follow the directions in the colored boxes and also read aloud those sections marked "SAY:." The directions for the various subtests are given on the pages indicated below.

| | |
|---|---|
| Test 1--Reading Vocabulary | Pages 15-16 |
| Test 2--Reading Comprehension | Pages 17-18 |
| Test 3--Spelling | Pages 19-20 |
| Test 4--Language Mechanics | Pages 21-22 |
| Test 5--Language Expression | Pages 23-24 |
| Test 6--Mathematics Computation | Page 25 |
| Test 7--Mathematics Concepts and Applications | Pages 26-27 |
| Test 8--Reference Skills | Page 28 |
| Test 9--Science | Pages 29-30 |
| Test 10--Social Studies | Pages 31-32 |

The directions should be read verbatim from the indicated pages above for each subtest during the test administration. Make sure the students are using the correct answer sheet for each subtest. In addition, if only Test 2 (Reading Comprehension) and Test 7 (Mathematics Concepts and Applications) are being administered, some additional instructions are necessary. On page 17 at the end of the second "SAY:" section, where it says, "Do not turn the page yet.", add the following:

> *Make sure you are marking your answers in the section of the answer sheet labelled "Test 2, Reading Comprehension." There should not be any marks made in the sections for Test 1 or Test 8."*

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**Page references in this section are to the CTBS Examiner's Manual (CTBS-EX-4-S-MAN).*

On page 26 at the end of the second "SAY:" section where it says, "Do not go on to the next page yet," add the following:

> *Make sure you are marking your answers in the section of the answer sheet labelled "Test 7, Mathematics Concepts and Applications." There should not be any marks made in the section for Test 6.*

Following the test administration check the answer sheets to ensure the presence of student names and make sure all answers appear in the correct sections of the answer sheets.

## Student Attitude Questionnaire

The Student Attitude Questionnaire is a composite of four separate instruments. The first part is a timed test while students can complete the other three sections at their own rate. However, all responses go onto one answer sheet.

Administration Procedure. Distribute the OpScan standard blue answer sheets (DS1120-C) to each student. Then follow the instructions given below.

SAY: *At all times during this test you are to use a #2 lead pencil. Now, turn your answer sheet sideways so that the top of the answer sheet is at the right side.* [DEMONSTRATE] *Print* (location name) *where it says "school,"* [PAUSE] (program name) *where it says "instructor,"* [PAUSE] *and* (today's date) *where it says "test."* [PAUSE]

SAY: *Now, print your last name in the boxes above the letter grids, followed by your first name and middle initial. Make sure your first name and middle initial begin in the appropriate spaces and that your first name does not exceed six letters. For example, if your first name is Elizabeth, you would print ELIZAB followed by your middle initial. Are there any questions?* [PAUSE]

SAY: *Now, blacken the appropriate letter box below each letter of your name. Use an oval motion of the pencil making sure the mark does not touch an adjoining box.* [Demonstrate by illustrating the correct method which should result in the following mark. [ ][●][ ] Emphasize that the mark should be large enough to almost fill the space from left to right but not so large as to touch an adjoining letter space. PAUSE]

SAY: *Now, find the box labelled "Semester" and blacken the space to the right of "Fall"* (if pretest, or *"Spring"* if posttest). [PAUSE]

SAY: *Next, blacken the appropriate number space indicating your grade level in the section labelled "Grade." Use the same oval motion of the pencil.* [PAUSE] *Now, print the last two digits of the year of your birth in the box below the section labelled "Year" under "Birthdate." If you were born in 1960, you would enter "60." Then, blacken the appropriate month and year spaces, again using an oval motion of the pencil.* [PAUSE] *Finally, print your sex as "B" for male or "G" for female and blacken the appropriate letter space under the section labelled "Sex." Are there any questions?* [Begin with the actual test directions.]

[***NOTE: When filling in answer blanks the oval motion is not necessary as the boxes are sufficiently separated on the answer sheet.]

The general directions for administering Part I, the New Mexico Career Oriented Activities Checklist, appear on page I-1 of the Student Attitude Questionnaire. Tell the students to read these directions to themselves while you read them aloud. Emphasize that response position #5 on the answer sheet will not be used for this section and should not be marked. The test is timed so keep an accurate record. When all directions have been read, tell the students to begin but remind them to stop if they get to the end of Part I.

Inform the students that they are free to ask the tester questions they may have about items on this instrument. This is accomplished with the least disruption by having students raise their hand if they have a question and then working with that student on an individual basis.

After 20 minutes have elapsed, tell the students to "STOP." Tell the students to turn to the directions for Part II, the School Opinion Scale, on page II-1. Then, instruct the students to read these directions to themselves while you read them aloud. Note that there are different instruction sets in the middle of the page for different test periods. Emphasize that students are to begin marking their responses in section II with item #41.

Before telling students to begin this section, tell them that they are to continue until they reach the end of the test. Remind them to read the instructions for each part and that the answers for each part are placed in a different section on the answer sheet. Again, the students are free to ask questions by raising their hand.

## Student Opinion Scale

The Student Opinion Scale, also known as the Psychosocial Maturity Scale or PMS, is available in two forms. The regular long form consists of 102 items comprising 9 scale scores, which convert into three summary scores, plus a social desirability ("lie") scale. The second version, Form SA, consists of 42 items comprising just 3 scale scores, which convert into one summary score, plus the social desirability ("lie") scale. The administration procedures and answer sheet are the same for both versions.

Administration Procedure. Distribute the OpScan standard blue answer sheets (DS1120-C) to each student. If neither the CTBS with Digitek answer sheets nor the Student Attitude Questionnaire are being administered, use the special directions below. Otherwise, skip to the section marked "[**]."

SAY: *At all times during this test you are to use a #2 lead pencil. Now, turn your answer sheet sideways so that the top of the answer sheet is at the right side.* [DEMONSTRATE] *Print* (location name) *where it says "school,"* [PAUSE] (program name) *where it says "instructor"* [PAUSE] *and* (today's date) *where it says "test."* [PAUSE]

*Now, print your last name in the boxes above the letter grids, followed by your first name and middle initial. Make sure your first name and middle initial begin in the appropriate spaces and that your first name does not exceed six letters. For example, if your first name is Elizabeth, you would print ELIZAB followed by your middle initial. Are there any questions?* [PAUSE]

*Now, find the box labelled "Semester" and blacken the box to the right of "Fall"* (if pretest, or *"Spring"* if posttest).

[If both the Student Attitude Questionnaire and the CTBS are not being administered, also use the following special directions. Otherwise, begin with the actual test directions.]

SAY: *Now, blacken the appropriate letter box below each letter of your name. Use an oval motion of the pencil making sure the mark does not touch an adjoining box.* [Demonstrate by illustrating the correct method which should result in the following mark. [ ][●][ ] Emphasize that the mark should be large enough to almost fill the space from left to right but not so large as to touch an adjoining letter space. PAUSE]

SAY: *Next, blacken the appropriate number space indicating your grade level in the section labelled "Grade." Use the same oval motion of the pencil.* [PAUSE] *Now, print the last two digits of the year of your birth in the box below the section labelled "Year" under "Birthdate." If you were born in 1960, you would enter "60." Then, blacken the appropriate month and year spaces, again using an oval motion of the pencil.* [PAUSE] *Finally, print your sex as "B" for male or "G" for female and blacken the appropriate letter space under the section labelled "Sex." Are there any questions?* [Begin with the actual test directions.]

[**]

SAY: *Turn your answer sheet sideways and print* (location name) *after "school,"* (program name) *after "instructor" and* (today's date) *after "test" as you did on the previous answer sheet(s). Be sure you are using a #2 lead pencil.* [PAUSE] *Now, print your name, last name first, as you did before in the appropriate boxes. Also, blacken the box to the right of "Fall"* (if pretest, or *"Spring"* if posttest). *You do not have to complete any other information. Any questions?* [PAUSE. Begin with the actual test directions.]

[***NOTE: When filling in answer blanks the oval motion is not necessary as the boxes are sufficiently separated on the answer sheet.]

Now distribute the Student Opinion Scale test booklets. The general directions for administering the Student Opinion Scale are given on the cover page of this instrument. Tell the students to read the directions to themselves while you read them aloud. Emphasize that response position #5 on the answer sheet will not be used and should not be marked. Students can then work on the instrument at their own pace.

## EBCE Student Application/Background Questionnaire

At some sites the EBCE Student Application/Background Questionnaire will be administered to prospective students before the program begins. At other sites, the application form will be completed by students prior to program entry, but the background questionnaire will be completed during pretesting.

Regardless of which way the instrument is administered at your site, the administration procedures are the same. The student is simply told to complete the Student Application form and secure his parents' signatures of approval. For the Student Background Questionnaire the student is told to read the general directions at the top of the page and complete the answers to all questions. If the background questionnaire is being administered with the application form already detached, be sure to have the students write their names in the upper right hand corner before beginning to complete the instrument. Also, tell the students to ignore the numbers in parentheses in the left hand margin as these numbers are for data processing purposes only.

Inform the students that they are free to ask the tester questions they may have about items on this instrument. This is accomplished with the least disruption by having students raise their hand if they have a question and then working with that student on an individual basis.

### NWREL EBCE Semantic Differential

The Semantic Differential is designed to tap student feelings about certain concepts. It is important that they understand the purpose of this instrument. Before beginning the instrument, have the students write their name on the line provided on the cover sheet. Then, tell the students to read the directions on the cover sheet to themselves while you read them aloud. Students can then work on the instrument at their own pace.

Inform the students that they are free to ask the tester any questions they may have about this instrument. This is accomplished with the least disruption by having students raise their hand if they have a question and then working with that student on an individual basis.

### Student End-of-Year Questionnaire

This instrument will be administered only during the posttest (usually at the end of the program year). Tell the students to write their names, location (or school district) and testing date in the spaces provided at the top of the questionnaire. Then, read the directions aloud while the students read them silently to themselves. Emphasize that the numbers in parentheses in the left hand margin are to be ignored as these are used for data processing purposes only.

Inform the students that they are free to ask the tester any questions they may have about items on this instrument. This is accomplished with the least disruption by having students raise their hand if they have a question and then working with that student on an individual basis.

*PLEASE NOTE: Additional information on scoring procedures for the evaluation instruments may be obtained from the NWREL Career Education office.*

# REPRODUCIBLE MATERIALS

# NWREL-DEVELOPED EBCE EVALUATION INSTRUMENTS

The reproducible materials found in this section are EBCE program evaluation instuments developed by NWREL. Some of these instruments, such as the Parent Opinion Survey and Employer Opinion Survey, contain items that were jointly developed by NWREL and the three other educational laboratories involved in the development of EBCE--Appalachia Educational Laboratory, Inc., Far West Laboratory for Educational Research and Development, and Research for Better Schools. School districts using NWREL's model of EBCE have permission to reproduce and use these evaluation instruments at no charge.

Listed below are the nine EBCE evaluation instruments contained in this section:

- Employer Opinion Survey
- Essential Characteristics Checklist
- Parent Opinion Survey
- Process Checklist
- Semantic Differential
- Staff Questionnaire
- Student Application/Background Questionnaire
- Student End-of-Year Questionnaire
- Student Projects Evaluation Forms

The forms are arranged alphabetically. Each is preceded by a summary of the purpose of the form, suggested data collection procedures and cover letters (where appropriate). The Student Attitude Questionnaire is not printed here since it contains copyright sections. This instrument can be purchased as described on page 70.

The forms themselves are printed full-size and "camera-ready" so you can use your own reproducing equipment to make multiple copies. They are printed here one side only to facilitate reproduction, but we recommend that you print the individual forms front and back for economy. These camera-ready forms have been hole-punched for inclusion in this handbook; be sure to mask the holes before reproducing them. You can mask over the holes with typist's white correction tape or any flat-finish tape, which is then "whited out" with standard typing correction fluid.

# EMPLOYER OPINION SURVEY

## Purpose

Since participating employers are an essential aspect of EBCE, their opinions about the program are important. This questionnaire is designed to determine how employers become involved with EBCE, how they judge the progress of students with whom they have worked, the impact of EBCE within their organization and their perceptions regarding the operations of the program and their role in it.

## Directions for Data Collection

It is recommended that this Employer Opinion Survey instrument be mailed out or delivered by a staff member to each employer instructor who has worked with one or more students during the year on either an exploration, learning or skill building level. The instrument is best distributed in late March or early April. By this time the employer instructor has been able to form an opinion about the EBCE program. Approximately two weeks after delivering the surveys a check should be made by a project staff member on which employers have not yet completed the survey. A followup call or delivery of a second copy of the survey should be made when appropriate to obtain a larger rate of completed surveys returned. The complete set should then be given to the evaluator for analysis.

## SAMPLE COVER LETTER FOR EBCE EMPLOYER OPINION SURVEY

Since our Experience-Based Career Education (EBCE) Program called ______________ [name of project] began we have worked with approximately _____[number of] students.

Our staff and the evaluation team are interested in finding out your opinion about how effective the program has been in providing meaningful education to students. Your answers on the enclosed Employer Opinion Survey will help us to identify the program's successes and failures and learn where improvements are needed.

The responses you make on this survey will be held in complete confidence by the evaluation team and only a summary of responses from all employer instructors will be given to the project staff.

Please complete the enclosed Employer Opinion Survey and return it to us in the self-addressed envelope by ________[date]. We will collect and forward these unopened questionnaires to the evaluator for analysis. The first one-half page of this survey has already been filled in to save you time. If there are errors in this section, please make the necessary corrections. If you have any questions as you complete the survey, please feel free to call me at _____________[telephone number].

We appreciate your taking the time to contribute to the evaluation effort. Your responses will help us improve the program for current students and for future students in such programs.

Best wishes,

_________________________
Project Director

(1)* 7 5

## EBCE EMPLOYER OPINION SURVEY

(3) Site Number____________________

Your Name__________________________________________________________

Title______________________________________________________________

Name of company/organization________________________________________

Type of company/organization________________________________________

(7) Approximate number of employees at your site____________________________

Length of time you have been participating with the program_______________

*Students in the program visit employer sites for a career exploration (usually several days to get an overview of a particular job) or for a learning level (usually several weeks or more to work on a project or get a more in-depth view of an occupation).*

1. When the student is on a career exploration or learning level at your site, approximately how many hours per week do you typically spend with the student?

(11) Number of hours per week for career exploration____________________

(13) Number of hours per week for learning level________________________

2. Which of the following supportive services do you (or others at your site) provide for the students? *(Check each appropriate category for career exploration and for learning level if you have had students for both levels.)*

| | | *Career Exploration* | | *Learning Level* |
|---|---|---|---|---|
| Talk about job opportunities? | (15) | ________ | (24) | ________ |
| Talk about the student's personal problems? | (16) | ________ | (25) | ________ |
| Talk about activities at your site? | (17) | ________ | (26) | ________ |
| Tutor in an academic area? | (18) | ________ | (27) | ________ |
| Evaluate individual student's assignments? | (19) | ________ | (28) | ________ |
| Assist students in non-job-related assignments? | (20) | ________ | (29) | ________ |
| Supervise students to perform a specific job-related task at your site? | (21) | ________ | (30) | ________ |

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**Please ignore the numbers in parentheses ( ) in the left margin. These numbers are for data processing purposes only.*

|  |  | *Career Exploration* |  | *Learning Level* |
|---|---|---|---|---|
| Help plan student assignments? | (22) | __________ | (31) | __________ |
| Other *(please write in)*__________<br>______________________________ | (23) | __________ | (32) | __________ |

(33) 3. How did you first become involved with the program? *(Check appropriate response.)*

1. ☐ Program personnel contacted me about the program
2. ☐ A student talked to me about the program
3. ☐ Another employer talked to me about the program
4. ☐ Company personnel talked to me about the program
5. ☐ Other *(please write in)*________________________________________
____________________________________________________________

(34) 4. Did the program staff provide you with enough information to help you direct student activities at your site?

1. ☐ Yes
2. ☐ No

Why? ________________________________________________
________________________________________________

(35) 5. Would you recommend to a potential employer or resource person that he/she also become involved with the program?

1. ☐ Yes
2. ☐ No

Why? ________________________________________________
________________________________________________

(36) 6. In general, do you think the EBCE students you have worked with have benefited by being at your site? *Circle the appropriate number from 1 (definitely no) to 5 (definitely yes).*

| *Definitely NO* |  |  |  | *Definitely YES* |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

(37) 7. In general, do you think the students you have worked with are really interested in learning new things?

| *Definitely NO* |  |  |  | *Definitely YES* |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

(38) 8. Do you receive adequate feedback about what happens to the students after they leave your site? *Circle a number from 1 (never) to 5 (always).*

| *Never* | | | | *Always* |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

(39) 9. Do you receive adequate feedback about the effectiveness of your work with the students?

| *Never* | | | | *Always* |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

(40) 10. How have employees at your site reacted to your agency's participation in EBCE? *(Check one.)*

1. ☐ Positive reaction
2. ☐ Negative reaction
3. ☐ Mixed reaction
4. ☐ No reaction
5. ☐ Not applicable
6. ☐ Don't know

11. In what ways (if any) have the employees at your site benefited? *Check one or more appropriate response(s):*

(41) 1. ☐ They haven't benefited
(42) 2. ☐ Increased their awareness of youth
(43) 3. ☐ Motivated the regular employees to further training
(44) 4. ☐ Reduced their workload
(45) 5. ☐ Increased interest in their own work
(46) 6. ☐ I don't know
(47) 7. ☐ Other *(please write in)*__________________________________________

____________________________________________________________

(48) 12. Do you plan to continue participating in the EBCE program next year? *(Check yes or no.)*

1. ☐ Yes 2. ☐ No

Why? *(Check one or more of the reasons below.)*

(49) 1. ☐ Program is worthwhile
(50) 2. ☐ I like the people involved
(51) 3. ☐ My participation is a community service
(52) 4. ☐ It is challenging to me
(53) 5. ☐ I have had problems with the staff
(54) 6. ☐ I have had problems with the students
(55) 7. ☐ The program is not effective
(56) 8. ☐ I don't have time
(57) 9. ☐ Other *(please write in)*______________________________

13. What do you think are the greatest strengths of the program? *(Check one or more reasons.)*

(58) 1.☐ Good alternative to a regular high school program
(59) 2.☐ Quality of the staff
(60) 3.☐ Students learn about a variety of careers
(61) 4.☐ Students learn about real life situations
(62) 5.☐ Good way of getting students to learn
(63) 6.☐ Experience in working with adults
(64) 7.☐ Other *(please write in)*______________________________

________________________________________________

14. What do you think are the greatest weaknesses of the program? *(Check one or more reasons.)*

(65) 1.☐ Some students can't handle the freedom
(66) 2.☐ Problems in the organization of the program
(67) 3.☐ Students not receiving sufficient training
(68) 4.☐ Inadequate supervision of students on job sites
(69) 5.☐ Too much paperwork
(70) 6.☐ Lack of feedback about students
(71) 7.☐ May be too difficult/technical for some students
(72) 8.☐ Other *(please write in)*______________________________

________________________________________________

(73) 15. How many students would your site be able to handle at one time for a career exploration?

1.☐ One student
2.☐ Two students
3.☐ Three to five students
4.☐ Six to eight students
5.☐ More than eight students

(74) 16. What do you feel students are able to learn on job sites that they could not learn as well in a regular school classroom? *(Check one or more reasons.)*

(74) 1.☐ First hand knowledge of demands in a "real world"
(75) 2.☐ Working with other people
(76) 3.☐ On-the-job skills
(77) 4.☐ Self-discipline
(78) 5.☐ Motivation to learn
(79) 6.☐ Nothing
(80) 7.☐ Other *(please write in)*

____________________

17. What other comments or recommendations about the program would you like to make?

________________________________________________

________________________________________________

________________________________________________

*THANKS FOR YOUR TIME IN COMPLETING THIS SURVEY*

# EBCE ESSENTIAL CHARACTERISTICS CHECKLIST

## Purpose

The purpose of this checklist is to determine to what degree sites using the NWREL EBCE program have been able to implement that program's essential characteristics. These characteristics consist of the basic philosophical and policy features considered essential to program organization and operation. Each project director is asked to complete the checklist.

## Directions for Data Collection

It is useful for this checklist to be completed by a project director several months after a program has begun and again toward the end of the school year. Some project directors have found it helpful to have the entire staff discuss their judgment about where the program is on certain dimensions of the checklist and to use it as a way of monitoring any areas they feel may have been neglected or omitted in the program's operation. The completion of the checklist toward the end of the school year can provide an opportunity to monitor ways in which the operation of the program may have changed over the year. This instrument takes approximately 15 minutes to complete.

## EBCE ESSENTIAL CHARACTERISTICS CHECKLIST

(3,4)* Site________________________________________

(5,6) Respondent____________________ Date__________________

*For each area, rate the project on a five-point scale using the anchor points indicated for each area. Place the number 1 to 5 that most clearly represents your opinion in the box by each area.*

### I. EBCE is an individualized program.

A. Ongoing staff assessment of student needs, interests and abilities in Basic Skills, Life Skills and Career Development:

(7) ☐
$\boxed{1}$ There is no ongoing assessment in two or more of these areas.
$\boxed{5}$ Student needs, interests and abilities are continually assessed.

B. Participation in assessment:

(8) ☐
$\boxed{1}$ Students play a passive role in the assessment process.
$\boxed{5}$ Students play an active role in the assessment process.

C. Individual negotiation:

(9) ☐
$\boxed{1}$ All student projects are preassigned and not subject to negotiation.
$\boxed{5}$ All student projects allow for negotiation between student and staff.

D. Integration

(10) ☐
$\boxed{1}$ Student projects are not integrated with a student's prior experiences.
$\boxed{5}$ Individual assessment and accountability are integrated with program learning strategies when learning plans are negotiated.

E. Accountability standards (a set of learning and behavioral expectations for students as members of the EBCE 'community'):

(11) ☐
$\boxed{1}$ There are few if any accountability standards.
$\boxed{5}$ Clear accountability standards exist and give students the necessary flexibility to meet basic program expectations.

### II. EBCE is a community-based program.

A. Community input into program planning and operation:

(12) ☐
$\boxed{1}$ No mechanism currently exists for obtaining community input.
$\boxed{5}$ A systematic mechanism exists for procuring and utilizing community input.

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**Please ignore the numbers in parentheses in the left margins. These numbers are for data processing purposes only.*

## II. EBCE is a community-based program. (continued)

B. Role of the program advisory board:

(13) ☐
1 There is no program advisory board.
5 The program advisory board takes an active role in direction of the program by providing program input.

C. Community members and student learning:

(14) ☐
1 Community members are not involved in student learning activities.
5 Community members serve as resource instructors and certifiers of student learning.

D. Provision for community instructor training/development activities:

(15) ☐
1 There are no community instructor training/development activities.
5 There are at least four, regularly scheduled community instructor training/development activities each year.

## III. EBCE is an experience-based program and is built from the career activities of adults.

A. Mode of learning:

(16) ☐
1 Students are instructed in a passive or school-like mode.
5 Active, realistic, lifelike learning activities are provided for all students.

B. Student activity:

(17) ☐
1 Students have little or no role in planning and scheduling their activities.
5 Students have the responsibility for budgeting their time and managing their daily activities.

C. Utilization of resources for learning:

(18) ☐
1 Secondary resources (textbooks, courses) are given priority.
5 Primary resources (people, institutions such as libraries and museums, events) are given priority.

D. Community learning activities:

(19) ☐
1 Adult activities in the community are not utilized in student learning.
5 Adult activities in the community serve as the primary context for student learning.

III. EBCE is an experience-based program and is built from the career activities of adults. (continued)

E. Reference population:

(20) ☐
1 Teachers and school work are the primary referent.
5 Adults in the world of work are the primary referent.

F. Community learning potential:

(21) ☐
1 No analysis is made of the learning potential of the local community.
5 There is systematic analysis that enables staff and students to take full advantage of the learning potential of the local community.

IV. EBCE must have its own identity and must be comprehensive and integrated.

A. Program requirements and processes:

(22) ☐
1 Regular high school requirements and processes are used to determine student learning plans.
5 EBCE program requirements and processes determine student learning plans.

B. Program completion requirements:

(23) ☐
1 Program completion requirements are vague, unspecified or not differentiated from the regular high school requirements.
5 Program completion requirements are clearly defined and consistent with program goals and local requirements.

C. Curriculum:

(24) ☐
1 The curriculum structure includes experiences in no more than one of the following areas: Basic Skills, Life Skills, Career Development.
5 The curriculum structure includes experiences in all of the above areas.

D. Survival competencies:

(25) ☐
1 There are no performance-based survival competencies in the program.
5 There are at least ten performance-based survival competencies in the program.

E. Interrelatedness of curriculum areas and student learning:

(26) ☐
1 Curriculum content areas, such as chemistry, are emphasized separately.
5 Emphasis is on interrelated curriculum areas and this is demonstrated by the student learning activities.

V. The EBCE program places a major emphasis on the career development of students.

A. Types of community learning situations:

(27) ☐

1 There are no employer/community learning sites.

5 Provision is made for different types and levels of learning situations at employer/community sites.

B. Emphasis at learning sites:

(28) ☐

1 Students are paid for their contributions on employer/community sites.

5 Students are on employer/community sites for learning about careers, not to earn money.

C. Career decision making:

(29) ☐

1 Students are not encouraged to improve their career decision making processes.

5 Students are required to gather information about themselves and the world of work and apply this information in career decision making.

D. Reflections on student experiences:

(30) ☐

1 There are few or no opportunities for student self-evaluation.

5 Students are encouraged to reflect on experiences and evaluate their own strengths, weaknesses and progress.

# PARENT OPINION SURVEY

## Purpose

The Parent Opinion Survey is designed to assess parents' perceptions of EBCE project strengths and weaknesses, benefits of the program to their son or daughter and the extent of their involvement in the program. Because EBCE is a program that actively involves parents as well as students, it becomes important to assess parental opinions regarding the program.

## Directions for Data Collection

A higher return rate of parent surveys is often obtained if the survey form is accompanied by a cover letter from the project director to the parents stating the purpose of the survey, confidentiality of the data and how the results might be used to improve the program. It is usually preferable that the parent surveys be mailed to parents rather than relying on students to take them home. Enclosing a stamped pre-addressed envelope with the survey helps insure a higher return rate. Past experience indicates that it takes approximately 20 minutes to complete this survey. Distributing the surveys to parents in early April generally gives them enough time since their son or daughter has entered the program to form a judgment of EBCE. This timing also allows for a followup mailing in early May to parents who have not returned the survey by that time.

Parent's name (optional)______________________________

School district_______________________________________

## EBCE PARENT OPINION SURVEY

This survey is meant to give you an opportunity to express your opinions about the Experience-Based Career Education (EBCE) program in which your son or daughter has been participating.

Most of the questions are to be answered on a scale of numbers from ① to ⑤ . The phrases at the top and bottom of each set of questions indicate what the scale means. A ① may mean something like "Definitely No"; if you feel strongly that the answer to the question is no, then you should circle the ① . A ⑤ may mean "Definitely Yes"; if you feel strongly that the answer is yes, then you should circle the ⑤ . The numbers in between (2, 3, 4) indicate an opinion somewhere in between "Definitely No" and "Definitely Yes." Some scales have different phrases, but they all work the same way.

Read the phrase above and below the numbers so you know what each scale means, then read each question and circle the number which is closest to your opinion. There are no right or wrong answers; your thoughts and feelings are the important things in this survey. The answers parents give will help determine how well the program is doing now and improve it in the future. Remember to circle a number for each item.

The name EBCE is used throughout this survey becuase the same form is being filled out by parents of participating students at other locations throughout the country where this type of experience-based career education program is being developed. For our project, whenever a question or statement in the survey refers to EBCE it means the particular EBCE project in which your son or daughter is participating.

# EBCE PROGRAM PARENT OPINION SURVEY

(1)* 7 3

(3) _ _ Site Number

1. How well do you feel the EBCE Program compares overall with the past school experiences of your daughter or son?

| | | | | | |
|---|---|---|---|---|---|
| | *Much Worse* | | | | *Much Better* |
| (7) | 1 | 2 | 3 | 4 | 5 |

2. If you had it to do over again, would you want your son or daughter to participate in the EBCE Program?

| | | | | | |
|---|---|---|---|---|---|
| | *Definitely No* | | | | *Definitely Yes* |
| (8) | 1 | 2 | 3 | 4 | 5 |

3. How well do you think your son or daughter likes the EBCE Program compared with past school experiences?

| | | | | | |
|---|---|---|---|---|---|
| | *Much Worse* | | | | *Much Better* |
| (9) | 1 | 2 | 3 | 4 | 5 |

4. Have you received enough information about your son or daughter's progress in the EBCE Program?

| | | | | | |
|---|---|---|---|---|---|
| | *Definitely No* | | | | *Definitely Yes* |
| (10) | 1 | 2 | 3 | 4 | 5 |

5. About how often have you had any contact with any EBCE Program staff members?

| | | | | | |
|---|---|---|---|---|---|
| | *Almost Never* | | | | *Very Frequently* |
| (11) | 1 | 2 | 3 | 4 | 5 |

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**Please ignore the numbers in parentheses in the left margins. These numbers are for data processing purposes only.*

6. In comparison with regular classes how much opportunity did the EBCE Program provide your daughter or son for learning about occupations?

| | | | | | |
|---|---|---|---|---|---|
| | *Much Less* | | *About the Same* | | *Much More* |
| (12) | 1 | 2 | 3 | 4 | 5 |

7. What effect, if any, has the EBCE Program had on helping your son or daughter form career plans?

| | | | | | |
|---|---|---|---|---|---|
| | *Definitely Bad* | | *No Effect* | | *Definitely Good* |
| (13) | 1 | 2 | 3 | 4 | 5 |

8. In comparison with regular classes how much opportunity did the EBCE Program provide your daughter or son for general learning (i.e., Basic Skills and Life Skills)?

| | | | | | |
|---|---|---|---|---|---|
| | *Much Less* | | *About the Same* | | *Much More* |
| (14) | 1 | 2 | 3 | 4 | 5 |

9. In comparison with past experiences in regular classes how motivated is your daughter or son to learn in the EBCE Program?

| | | | | | |
|---|---|---|---|---|---|
| | *Much Less* | | *About the Same* | | *Much More* |
| (15) | 1 | 2 | 3 | 4 | 5 |

10. Before entering the EBCE Program, how often did your son or daughter talk to you about what was going on in regular classes?

| | | | | | |
|---|---|---|---|---|---|
| | *Almost Never* | | | | *Almost Daily* |
| (16) | 1 | 2 | 3 | 4 | 5 |

11. How often does your son or daughter talk to you about what's going on in the EBCE Program?

| | | | | |
|---|---|---|---|---|
| *Almost Never* | | | | *Almost Daily* |
| 1 | 2 | 3 | 4 | 5 |

12. How many meetings have you attended during this school year where other parents of EBCE students were present?

(18) None 1 2 3 4 or more

13. What do you think are the greatest weaknesses of the EBCE Program? *(Check any of the following which are applicable.)*

(19) ☐ 1. Some students can't handle the freedom
(20) ☐ 2. Problems in the organization/staffing of the program
(21) ☐ 3. Students not receiving sufficient training in basic skills or survival skills
(22) ☐ 4. Inadequate supervision of students on job sites
(23) ☐ 5. Lack of a variety of job sites to meet students' interests
(24) ☐ 6. Other *(please write in)*____________________________

14. What do you think are the greatest strengths of the EBCE Program? *(Check any of the following which are applicable.)*

(25) ☐ 1. Good alternative to a regular school program
(26) ☐ 2. Quality of the staff
(27) ☐ 3. Students learn about a variety of careers
(28) ☐ 4. Students learn about "real life" situations and responsibility
(29) ☐ 5. Good way of getting students to learn
(30) ☐ 6. Experience in working with adults
(31) ☐ 7. Individual treatment of students
(32) ☐ 8. Other *(please write in)*____________________________

15. What positive changes, if any, have you noticed in your son or daughter that you feel are a result of participation in the EBCE Program? *(Check one or more of the following.)*

(33) ☐ 1. Greater maturity or self direction
(34) ☐ 2. Better able to relate to others
(35) ☐ 3. Greater self confidence
(36) ☐ 4. Clearer direction about his/her future
(37) ☐ 5. More interested in education
(38) ☐ 6. Better understanding of jobs
(39) ☐ 7. Improvement in basic skills
(40) ☐ 8. More realistic attitudes toward life, work, etc.
(41) ☐ 9. None
(42) 10. Other *(please write in)*____________________________

16. What negative changes, if any, have you noticed in your son or daughter that you feel are a result of participation in the EBCE Program? *(Check one or more of the following.)*

(43) ☐ 1. Less interested in education

(44) ☐ 2. Less interested in working

(45) ☐ 3. More critical of others

(46) ☐ 4. Disappointed with the program

(47) ☐ 5. None

(48) ☐ 6. Other *(please write in)* ______________________________

______________________________

17. What types of knowledge, skills or attitudes have your son or daughter acquired in the EBCE Program that you feel he or she would not have gotten from a regular high school program? *(Check one or more of the following.)*

(49) ☐ 1. First-hand knowledge of demands in a "real world"

(50) ☐ 2. Working with other people

(51) ☐ 3. On-the-job skills

(52) ☐ 4. Self-discipline

(53) ☐ 5. Motivation to learn

(54) ☐ 6. Nothing

(55) ☐ 7. Other *(please write in)* ______________________________

______________________________

(56) 18. What changes, if any, would you recommend in the EBCE Program?

______________________________

______________________________

# EBCE PROCESS CHECKLIST

## Purpose

This checklist is intended as an instrument to identify areas in which EBCE sites are consistent with or different from the NWREL EBCE operational model. Deviations from NWREL procedures are viewed here from a neutral perspective in that certain deviations may produce different results than those described in the NWREL EBCE handbooks. A description of what deviations occur, their reasons and their results is essential for an understanding of the EBCE implementation effort. This checklist covers four areas: program objectives, management and organization, curriculum and instruction and student services processes.

## Directions for Data Collection

It is useful for this checklist to be completed by a project director several months after a program has begun and again toward the end of the school year. Some project directors have found it helpful to have the entire staff discuss their judgment about where the program is on certain dimensions of the checklist and to use it as a way of monitoring any areas they feel may have been neglected or omitted in the program's operation. The completion of the checklist toward the end of the school year can provide an opportunity to monitor ways in which the operation of the program may have changed over the year. This instrument takes approximately 20-30 minutes to complete.

# EBCE PROCESS CHECKLIST

(3,4)*Site ____________________

(5,6) Respondent ____________________ Date ____________________

## I. OBJECTIVES

*For each objective listed below please check whether it applies to all, some or none of your EBCE students. Also list any additional student outcomes that your project may have. (Please note that the Life Skills curriculum area is not included here because it is addressed in Section III B.)*

| | | *USED WITH:* | | |
|---|---|---|---|---|
| | | *All Students* | *Some Students* | *No Students* |
| | Career Development | | | |
| (7) | 1. Students will increase their knowledge of their own aptitudes, interests and abilities and apply this understanding to their potential career interests. | ____ | ____ | ____ |
| (8) | 2. Students will increase their knowledge of social, governmental and economic issues and trends in the world of work. | ____ | ____ | ____ |
| (9) | 3. Students will develop the general skills of job finding, job application, on-the-job negotiation and dependability necessary in daily work interactions. | ____ | ____ | ____ |
| (10) | 4. Students will analyze potential careers for financial and psychological inducements, preparation needs and preparation programs available. | ____ | ____ | ____ |
| | Basic Skills | | | |
| (11) | 5. Students will improve in their performance level of fundamental basic skills (reading, writing, oral communication and mathematics). | ____ | ____ | ____ |

---

*Please ignore the numbers in parentheses. These numbers are for data processing purposes only.*

|  |  | USED WITH: |  |  |
|---|---|---|---|---|
|  |  | *All Students* | *Some Students* | *No Students* |
| (12) | 6. Students will be able to perform applied skill tasks related to careers of interest to them. | ____ | ____ | ____ |
| (13) | 7. Students will become aware of the level of basic skills needed to enter careers of interest to them and will understand the relationship of that level to their current basic skills proficiency. | ____ | ____ | ____ |
| (14) | 8. Students will demonstrate an increased willingness to apply basic skills to work tasks and to everyday problems. | ____ | ____ | ____ |

## Experiential Outcomes

|  |  |  |  |  |
|---|---|---|---|---|
| (15) | 9. Students will broaden the range of sources they use (people, events, institutions, laws, books, etc.) in gathering information for work and decision making. | ____ | ____ | ____ |
| (16) | 10. Students will demonstrate the ability to conduct conversation with an adult that reveals the student's self-confidence and understanding of the other person's message and feelings. | ____ | ____ | ____ |
| (17) | 11. Students will demonstrate an increase in self-initiated behaviors and in assuming responsibility for carrying out and evaluating tasks which they agree to complete. | ____ | ____ | ____ |
| (18) | 12. Students will demonstrate an increase in behaviors that reveal a tolerance for people and institutions having different values, ideas or background than themselves; an openness to change and a willingness to trust others when circumstances warrant. | ____ | ____ | ____ |

| | | USED WITH: | |
|---|---|---|---|
| | All Students | Some Students | No Students |
| 13. Students will include data from their total sensory system as part of their input into (19) their decision-making processes. | ______ | ______ | ______ |
| 14. Students will be able to assume adult responsibilities and relationships in a (20) positive and self-confident manner. | ______ | ______ | ______ |
| 15. Students who select a career area to pursue will acquire specific job skills while at employer sites related to their (21) career area. | ______ | ______ | ______ |
| (22) 16. Other outcomes *(please list)*__________ | ______ | ______ | ______ |
| (23) ______________________________ | ______ | ______ | ______ |
| (24) ______________________________ | ______ | ______ | ______ |
| (25) ______________________________ | ______ | ______ | ______ |
| (26) ______________________________ | ______ | ______ | ______ |

## II. MANAGEMENT AND ORGANIZATION PROCESSES

*Please check the appropriate response that describes the current status of your project on each of the following dimensions.*

1. Has the district school board approved the project?

(27)

☐ 1. Approved in writing ☐ 2. Verbally approved ☐ 3. Not approved

2. Has the state department of education approved the project?

(28)

☐ 1. Approved in writing ☐ 2. Verbally approved ☐ 3. Not approved

3. Does the project meet all legal and fair labor practice requirements?

(29)

☐ 1. Yes ☐ 2. Meets most requirements ☐ 3. No

*(If you select "meets most requirements" or no," please explain.)*

4. Are the following staff roles being used? *(Check those roles actually defined and used.)*

(30) ☐ Project director
(31) ☐ Learning manager
(32) ☐ Employer relations specialist
(33) ☐ Learning resource specialist
(34) ☐ Student coordinator
(35) ☐ Learning assistant
(36) ☐ Aides
(37) ☐ Others *(list)*____________
________________________

## III. CURRICULUM AND INSTRUCTION PROCESSES

### A. Competencies

*Of the following competencies check those, if any, that are part of your program. List any competencies your site may have added. Indicate if they are required of all students or are optional. If your site uses competencies differently than as described on pages 331-407 of the NWREL EBCE* Curriculum & Instruction *handbook, please explain the differences on the back of this sheet.*

| | | *Required* | *Optional* | *Used Differently Than in the Handbook* | *Not Used* |
|---|---|---|---|---|---|
| (38) | 1. Transact business on a credit basis | ____ | ____ | ____ | ____ |
| (39) | 2. Maintain checking account | ____ | ____ | ____ | ____ |
| (40) | 3. Provide adequate insurance for yourself, family and possessions | ____ | ____ | ____ | ____ |
| (41) | 4. File state and federal taxes | ____ | ____ | ____ | ____ |
| (42) | 5. Budget time and money effectively | ____ | ____ | ____ | ____ |
| (43) | 6. Maintain good physical health and make effective use of leisure time | ____ | ____ | ____ | ____ |
| (44) | 7. Respond appropriately to fire, police and physical health emergencies | ____ | ____ | ____ | ____ |
| (45) | 8. Participate in the electoral process | ____ | ____ | ____ | ____ |

| | | Required | Optional | Used Differently Than in the Handbook | Not Used |
|---|---|---|---|---|---|
| (46) | 9. Understand the basic structure and function of local government | ___ | ___ | ___ | ___ |
| (47) | 10. Explain personal legal rights | ___ | ___ | ___ | ___ |
| (48) | 11. Make appropriate use of public agencies | ___ | ___ | ___ | ___ |
| (49) | 12. Make application for employment and successfull hold a job | ___ | ___ | ___ | ___ |
| (50) | 13. Operate and maintain an automobile | ___ | ___ | ___ | ___ |
| (51) | 14. Other competencies *(please list)* ___ | ___ | ___ | ___ | ___ |
| (52) | ___ | ___ | ___ | ___ | ___ |
| (53) | ___ | ___ | ___ | ___ | ___ |

B. Student Projects

1. *Check those projects, if any, that are part of your program. List any student projects your site may have added. Indicate if they are required of all students or are optional. If your site uses student projects differently than described on pages 189-273 of the NWREL EBCE Curriculum & Instruction handbook, please explain the differences on the back of this sheet.*

| | | Required | Optional | Used Differently Than in the Handbook | Not Used |
|---|---|---|---|---|---|
| (54) | 1. Creative development predesigned project | ___ | ___ | ___ | ___ |
| (55) | 2. Creative development individual project | ___ | ___ | ___ | ___ |
| (56) | 3. Critical thinking predesigned project | ___ | ___ | ___ | ___ |
| (57) | 4. Critical thinking individual project | ___ | ___ | ___ | ___ |
| (58) | 5. Functional citizenship predesigned project | ___ | ___ | ___ | ___ |
| (59) | 6. Functional citizenship individual project | ___ | ___ | ___ | ___ |

|  |  | *Required* | *Optional* | *Used Differently Than in the Handbook* | *Not Used* |
|---|---|---|---|---|---|
| (60) | 7. Personal/social development predesigned project | ____ | ____ | ________ | ____ |
| (61) | 8. Personal/social development individual project | ____ | ____ | ________ | ____ |
| (62) | 9. Science predesigned project | ____ | ____ | ________ | ____ |
| (63) | 10. Science individual project | ____ | ____ | ________ | ____ |
| (64) | 11. Others ____________ | ____ | ____ | ________ | ____ |
| (65) | ____________ | ____ | ____ | ________ | ____ |
| (66) | ____________ | ____ | ____ | ________ | ____ |

(67,68) 2. How many projects is each student expected to complete each year? ______

3. On individually prepared Life Skills projects, who generally does the following? *(Check responses that apply)*:

|  |  |  |  |  |
|---|---|---|---|---|
| (69) | 1. Selects the topics | ☐ 1. Students | ☐ 2. Staff | ☐ 3. Both |
| (70) | 2. Determines the objectives and activities | ☐ 1. Students | ☐ 2. Staff | ☐ 3. Both |
| (71) | 3. Evaluates the results | ☐ 1. Students | ☐ 2. Staff | ☐ 3. Both |

## C. Exploration Package

(72) 1. Are the exploration packages--

- ☐ 1. Required of all students
- ☐ 2. Required of some students
- ☐ 3. Optional for students
- ☐ 4. Used differently than described on pages 105-185 of the NWREL EBCE Curriculum & Instruction handbook. If so, please explain the differences.

2. How many explorations, if any, are required of students in your program?
(73,74) ______

3. Who selects the exploration sites for an individual student?

(75)
☐ 1. EBCE staff
☐ 2. The student
☐ 3. Staff and student jointly
☐ 4. Other *(please specify)*

(76,77) 4. What is the average length of each exploration in hours? ______

D. Learning Level Process

(7) 1. Are learning levels--

☐ 1. Required of all students
☐ 2. Required of some students
☐ 3. Optional for students
☐ 4. Used differently than described on pages 277-327 of the NWREL EBCE Curriculum & Instruction handbook. If so, please explain the differences.

(8) 2. How many learning level experiences, if any, are required of students in your program?_______

(9,10) 3. What is the average length of each learning level in hours?_____

E. Student Journals

(11) 1. What are the primary purposes served by the journals?

☐ 1. Analyzing and integrating career awareness information
☐ 2. Developing communications skills
☐ 3. Helping students know themselves better
☐ 4. Developing trust relationships with an adult
☐ 5. Other *(please list)* ________________________________

(12) 2. Are student journals--

☐ 1. Required of all students
☐ 2. Required of some students
☐ 3. Optional for students
☐ 4. Used differently than described on pages 411-451 of the Curriculum & Instruction handbook. If so, please explain the differences.

(13) 3. Approximately how often are students required to write journal entries?

☐ 1. Daily ☐ 2. Weekly ☐ 3. Biweekly ☐ 4. Monthly ☐ 5. Other

(14) 4. How often are students required to turn in their journals to a staff member?

☐ 1. Daily ☐ 2. Weekly ☐ 3. Bimonthly ☐ 4. Monthly ☐ 5. Other

F. Student Seminars by Employers

(15,16) 1. Approximately how many seminars with employer or community resource people have you held for students or do you plan to hold this school year? ________

G. Skill Building Level

(17) 1. Will skill building levels at employer sites be--

☐ 1. Required of all students
☐ 2. Required of some students
☐ 3. Optional for students
☐ 4. Used differently than described on pages 277-327 of the NWREL EBCE Curriculum & Instruction handbook. If so, please explain the differences.

(18) 2. If skill building levels are an intended part of your program, have any students begun them yet? ☐ 1. Yes ☐ 2. No

H. Special Placements

(19) 1. Are "special placements" of students at employer or community sites for Life Skills or Basic Skills an option within your program?

☐ 1. Yes ☐ 2. No

(20) 2. If "special placements" are a part of your program, have any students begun them yet? ☐ 1. Yes ☐ 2. No

I. Specific Curriculum Materials

*Please indicate which of the following materials are used by students in your program.*

| | | *USED BY:* | |
|---|---|---|---|
| | *All Students* | *Some Students* | *No Students* |
| (21) 1. Individualized Learning for Adults (ILA) Basic Skills materials | ____ | ____ | ____ |
| (22) 2. Career Information System (CIS) | ____ | ____ | ____ |

|  |  | *USED BY:* |  |
|---|---|---|---|
|  | *All Students* | *Some Students* | *No Students* |
| 3. Other materials *(please specify)* |  |  |  |
| (23) ____________________ | ______ | ______ | ______ |
| (24) ____________________ | ______ | ______ | ______ |
| (25) ____________________ | ______ | ______ | ______ |

## J. Program Completion Requirements

(26) 1. Does your project have written program completion requirements that are clearly defined? ☐ 1. Yes ☐ 2. No

(27) 2. If yes, are the requirements like those described on pages 52-53 of the NWREL EBCE Curriculum & Instruction handbook? ☐ 1. Yes ☐ 2. No
If no, please describe the differences.

## IV. STUDENT SERVICES

### A. Student Recruitment

(28) 1. Has student recruitment been aimed at a cross section of local high school students? ☐ 1. Yes ☐ 2. No

(29) If no, what types of students have been recruited? ____________________

(30) 2. What recruitment strategies were used?

(31) 3. When were students recruited?

(32) 4. Wnat types of students actually entered the program? *(Indicate only if different from type of student recruited.)*

### B. Classes

(33) 1. Are students allowed to take classes at the local high school?
☐ 1. Yes ☐ 2. No

(34,35) 2. If yes, how many students are taking such classes? __________

(36) 2. Are students allowed to take classes at community colleges or other institutions? ☐ 1. Yes ☐ 2. No If yes, how many students are

(37,38) taking such classes?______________

(39) 3. Are students allowed to take classes or courses at employer sites?
☐ 1. Yes ☐ 2. No If yes, how many students are taking such

(40,41) classes?_________

## C. Guidance

1. Is the guidance function shared by all professional staff members?

(42) ☐ 1. Yes ☐ 2. No If no, how is the function handled?

(43) 2. Do staff members conduct student staffing sessions regularly to discuss the progress of each student? ☐ 1. Yes ☐ 2. No If no, how do staff share information about students?

## D. Accountability System

(44) 1. Does your project utilize a student accountability system with clearly defined expectations and consequences? ☐ 1. Yes ☐ 2. No

(45) 2. If yes, does your accountability system work like that described on pages 77-91 of the Curriculum & Instruction handbook?
☐ 1. Yes ☐ 2. No
If no, please describe the differences.

## E. School Year Action Zones

1. How many, if any, school year action zones for students are utilized

(46,47) by your project? If none, write "0." ______

(48) 2. If you have action zones, are they organized like those described on pages 81-84 of the NWREL EBCE Curriculum & Instruction handbook?
☐ 1. Yes ☐ 2. No
If no, please describe the differences.

## F. Assessment Forms

*Listed below are a number of EBCE forms or instruments sometimes used. Please indicate which forms are required, optional or not used. Also indicate if they are revised or different from those developed or used by NWREL.*

|  |  | Required | Optional | Not used | Revised or different from the handbook |
|---|---|---|---|---|---|
| (49) | 1. CTBS Reading & Arithmetic Subtests (C:27,54)* | ___ | ___ | ___ | ___ |
| (50) | 2. Basic Skills Prescription Pad (C:635) | ___ | ___ | ___ | ___ |
| (51) | 3. Self Directed Search (C:116,145,640-41) | ___ | ___ | ___ | ___ |
| (52) | 4. Student Attitude Questionnaire | ___ | ___ | ___ | ___ |
| (53) | 5. Semantic Differential | ___ | ___ | ___ | ___ |
| (54) | 6. Psychosocial Maturity Scale (Student Opinion Scale) | ___ | ___ | ___ | ___ |
| (55) | 7. Parent Opinion Survey | ___ | ___ | ___ | ___ |
| (56) | 8. Employer Opinion Survey | ___ | ___ | ___ | ___ |
| (57) | 9. Student Application Form (S:69-75) | ___ | ___ | ___ | ___ |
| (58) | 10. Staff Questionnaire | ___ | ___ | ___ | ___ |
| (59) | 11. End-of-Year Student Questionnaire | ___ | ___ | ___ | ___ |
| (60) | 12. Learning Site Analysis Form (C:72-75) | ___ | ___ | ___ | ___ |
| (61) | 13. Skill Development Record (S:108-109) | ___ | ___ | ___ | ___ |
| (62) | 14. Student Performance Review (by employers) (S:112-113) | ___ | ___ | ___ | ___ |

---

*This form is shown or discussed in the designated NWREL EBCE handbook on these pages. (C = Curriculum & Instruction; S = Student Services) Those not referenced will be found in the Program Evaluation handbook.

|  |  |  | Required | Optional | Not used | Revised or different from the handbook |
|---|---|---|---|---|---|---|
| (63) | 15. | Student Evaluation of Learning Site (S:110-111) | ____ | ____ | ____ | ____ |
| (64) | 16. | EBCE Record of Student Performance (S:265-297) | ____ | ____ | ____ | ____ |
| (65) | 17. | EBCE Student Experience Record (S:102-104) | ____ | ____ | ____ | ____ |
| (66) | 18. | Weekly Time Reports (S:90-91) | ____ | ____ | ____ | ____ |
| (67) | 19. | Student Profile Sheet (S:98-99) | ____ | ____ | ____ | ____ |
| (68) | 20. | Accountability Write-Up Form (S:118-119) | ____ | ____ | ____ | ____ |
| (69) | 21. | Learning Site Utilization Form (S:106-107) | ____ | ____ | ____ | ____ |
| (70) | 22. | Maintenance Visit Record (S:130-131) | ____ | ____ | ____ | ____ |
| (71) | 23. | Zone Debriefing Form (S:116-117) | ____ | ____ | ____ | ____ |
| (72) | 24. | Predesigned Projects (C:196) | ____ | ____ | ____ | ____ |

2. *Please list any additional forms or instruments your project uses*
(73-75) *and attach a copy of each to this checklist.*

____________________________________________

____________________________________________

____________________________________________

____________________________________________

____________________________________________

## SEMANTIC DIFFERENTIAL

### Purpose

The Semantic Differential is an instrument that measures in an indirect way students' feelings about certain concepts. In this case, the concepts of me, school, adults, learning, work, decision making and community resources were chosen by the demonstration site staff and a clinical psychologist as central concepts in the EBCE program. Using a five-point scale, students rated each concept in terms of the following 15 polar adjectives: interesting-boring, unfriendly-friendly, good-bad, easy-difficult, scary-fun, tense-relaxed, reasonable-unreasonable, sad-happy, wise-foolish, irrelevant-relevant, open-closed, painful-pleasurable, important-unimportant, weak-strong and warm-cold. Significant increases have generally been shown on these concepts between pre and posttest sessions for EBCE students, thus reflecting a change in feeling about these concepts.

### Directions for Data Collection

The Semantic Differential can be administered to EBCE students as a group during the pretest session and the posttest session. This is not a timed test and students should be reminded to work rapidly and record their first impressions rather than taking time to reflect at length on any pair of adjectives. Students should be reminded that if they feel a pair of words does not apply or are undecided, they should place the "x" in the center space rather than leave the line blank.

Name ______________________________

Project or
School District ____________________

Date ________________________________

## SEMANTIC DIFFERENTIAL

On each of the following pages there is a different topic for you to describe. Your description can be made by marking the list of words on the page. Take a look to see how this is done. Each pair of words forms a scale.

For example, if you feel that the topic named at the top of the page is very closely associated with one end of the scale, you would place an "x" as follows:

(fair _x_:___:___:___:___ unfair) or (fair ___:___:___:___:_x_ unfair)

If you feel that the topic named at the top of the page is only slightly related to one or the other end of the scale, you would place an "x" as follows:

(fair ___:_x_:___:___:___ unfair) or (fair ___:___:___:_x_:___ unfair)

If you consider both sides equally associated with the topic named at the top of the page, you would place an "x" in the center space as follows:

(fair ___:___:_x_:___:___ unfair) or (fair ___:___:_x_:___:___ unfair)

*Remember: Never put more than one "x" on any scale. And also be sure to check every item. If you feel that a pair of words does not apply, or if you are undecided, place the "x" in the center space; do not leave the line blank.*

# ME

INTERESTING ________:________:________:________:________ BORING

UNFRIENDLY ________:________:________:________:________ FRIENDLY

GOOD ________:________:________:________:________ BAD

EASY ________:________:________:________:________ DIFFICULT

SCARY ________:________:________:________:________ FUN

TENSE ________:________:________:________:________ RELAXED

REASONABLE ________:________:________:________:________ UNREASONABLE

SAD ________:________:________:________:________ HAPPY

WISE ________:________:________:________:________ FOOLISH

IRRELEVANT ________:________:________:________:________ RELEVANT

OPEN ________:________:________:________:________ CLOSED

PAINFUL ________:________:________:________:________ PLEASURABLE

IMPORTANT ________:________:________:________:________ UNIMPORTANT

WEAK ________:________:________:________:________ STRONG

WARM ________:________:________:________:________ COLD

## ADULTS

INTERESTING _______:_______:_______:_______:_______ BORING

UNFRIENDLY _______:_______:_______:_______:_______ FRIENDLY

GOOD _______:_______:_______:_______:_______ BAD

EASY _______:_______:_______:_______:_______ DIFFICULT

SCARY _______:_______:_______:_______:_______ FUN

TENSE _______:_______:_______:_______:_______ RELAXED

REASONABLE _______:_______:_______:_______:_______ UNREASONABLE

SAD _______:_______:_______:_______:_______ HAPPY

WISE _______:_______:_______:_______:_______ FOOLISH

IRRELEVANT _______:_______:_______:_______:_______ RELEVANT

OPEN _______:_______:_______:_______:_______ CLOSED

PAINFUL _______:_______:_______:_______:_______ PLEASURABLE

IMPORTANT _______:_______:_______:_______:_______ UNIMPORTANT

WEAK _______:_______:_______:_______:_______ STRONG

WARM _______:_______:_______:_______:_______ COLD

## SCHOOL

INTERESTING ________:________:________:________:________ BORING

UNFRIENDLY ________:________:________:________:________ FRIENDLY

GOOD ________:________:________:________:________ BAD

EASY ________:________:________:________:________ DIFFICULT

SCARY ________:________:________:________:________ FUN

TENSE ________:________:________:________:________ RELAXED

REASONABLE ________:________:________:________:________ UNREASONABLE

SAD ________:________:________:________:________ HAPPY

WISE ________:________:________:________:________ FOOLISH

IRRELEVANT ________:________:________:________:________ RELEVANT

OPEN ________:________:________:________:________ CLOSED

PAINFUL ________:________:________:________:________ PLEASURABLE

IMPORTANT ________:________:________:________:________ UNIMPORTANT

WEAK ________:________:________:________:________ STRONG

WARM ________:________:________:________:________ COLD

## LEARNING

INTERESTING ________:________:________:________:________ BORING

UNFRIENDLY ________:________:________:________:________ FRIENDLY

GOOD ________:________:________:________:________ BAD

EASY ________:________:________:________:________ DIFFICULT

SCARY ________:________:________:________:________ FUN

TENSE ________:________:________:________:________ RELAXED

REASONABLE ________:________:________:________:________ UNREASONABLE

SAD ________:________:________:________:________ HAPPY

WISE ________:________:________:________:________ FOOLISH

IRRELEVANT ________:________:________:________:________ RELEVANT

OPEN ________:________:________:________:________ CLOSED

PAINFUL ________:________:________:________:________ PLEASURABLE

IMPORTANT ________:________:________:________:________ UNIMPORTANT

WEAK ________:________:________:________:________ STRONG

WARM ________:________:________:________:________ COLD

# DECISION MAKING

INTERESTING _______:_______:_______:_______:_______ BORING

UNFRIENDLY _______:_______:_______:_______:_______ FRIENDLY

GOOD _______:_______:_______:_______:_______ BAD

EASY _______:_______:_______:_______:_______ DIFFICULT

SCARY _______:_______:_______:_______:_______ FUN

TENSE _______:_______:_______:_______:_______ RELAXED

REASONABLE _______:_______:_______:_______:_______ UNREASONABLE

SAD _______:_______:_______:_______:_______ HAPPY

WISE _______:_______:_______:_______:_______ FOOLISH

IRRELEVANT _______:_______:_______:_______:_______ RELEVANT

OPEN _______:_______:_______:_______:_______ CLOSED

PAINFUL _______:_______:_______:_______:_______ PLEASURABLE

IMPORTANT _______:_______:_______:_______:_______ UNIMPORTANT

WEAK _______:_______:_______:_______:_______ STRONG

WARM _______:_______:_______:_______:_______ COLD

# COMMUNITY RESOURCES

INTERESTING _______:_______:_______:_______:_______ BORING

UNFRIENDLY _______:_______:_______:_______:_______ FRIENDLY

GOOD _______:_______:_______:_______:_______ BAD

EASY _______:_______:_______:_______:_______ DIFFICULT

SCARY _______:_______:_______:_______:_______ FUN

TENSE _______:_______:_______:_______:_______ RELAXED

REASONABLE _______:_______:_______:_______:_______ UNREASONABLE

SAD _______:_______:_______:_______:_______ HAPPY

WISE _______:_______:_______:_______:_______ FOOLISH

IRRELEVANT _______:_______:_______:_______:_______ RELEVANT

OPEN _______:_______:_______:_______:_______ CLOSED

PAINFUL _______:_______:_______:_______:_______ PLEASURABLE

IMPORTANT _______:_______:_______:_______:_______ UNIMPORTANT

WEAK _______:_______:_______:_______:_______ STRONG

WARM _______:_______:_______:_______:_______ COLD

## WORK/WORKING

INTERESTING ________:________:________:________:________ BORING

UNFRIENDLY ________:________:________:________:________ FRIENDLY

GOOD ________:________:________:________:________ BAD

EASY ________:________:________:________:________ DIFFICULT

SCARY ________:________:________:________:________ FUN

TENSE ________:________:________:________:________ RELAXED

REASONABLE ________:________:________:________:________ UNREASONABLE

SAD ________:________:________:________:________ HAPPY

WISE ________:________:________:________:________ FOOLISH

IRRELEVANT ________:________:________:________:________ RELEVANT

OPEN ________:________:________:________:________ CLOSED

PAINFUL ________:________:________:________:________ PLEASURABLE

IMPORTANT ________:________:________:________:________ UNIMPORTANT

WEAK ________:________:________:________:________ STRONG

WARM ________:________:________:________:________ COLD

# STAFF QUESTIONNAIRE

## Purpose

This questionnaire asks the staff to rate the importance and perceived effectiveness of learning strategies used in EBCE. It also contains questions dealing with the staff's perception of factors contributing to and those limiting the success of the program, changes they would suggest in the program and areas in which they feel students have made greatest and least growth. Because the staff are working with the program on a daily basis, their perception of strengths and weaknesses and their recommendations for change are important to consider.

## Directions for Data Collection

This questionnaire can be distributed by the EBCE project director to the staff for return in a sealed envelope to the project secretary for a return mailing to the evaluator. The envelope should state on the outside the staff member's name. It takes approximately 15 minutes to complete this form. A week after the questionnaires have been distributed the project director should check to see if all staff have completed the questionnaire and request that any outstanding questionnaires be returned.

The suggested memo on the following page may be useful as a cover letter.

## SAMPLE MEMO

MEMO TO: EBCE Project Staff

FROM: Project Director

RE: EBCE Staff Questionnaire

Please take a few minutes to read and complete this staff questionnaire. It measures your perceptions of the importance and effectiveness of key learning strategies, the extent to which learning goals have been attained by the program and overall assessments of the program. The recording of staff evaluations of program effects is a very important aspect of the evaluation of EBCE, and this questionnaire is the primary source of these data.

Please complete this questionnaire by ____________________________ and give it to the project secretary in the sealed envelope for a return mailing to the evaluator.

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# EBCE STAFF QUESTIONNAIRE

(1)* 7 4

(3) _ _ Site number

1. Listed below are major learning activities used in one or more EBCE programs. Please rate each, first in terms of how important you feel it is for EBCE students, and secondly in terms of how effective you feel it has been this year. Some activities may be considered important, but not producing effective results while others may be considered very effective but of low importance. If the activity is not used in your project, please circle NA for not applicable. Circle 1 for not important or not effective to 5 for highly important or highly effective.

| | | *Learning Activities* | HOW IMPORTANT<br>*Not Imp.* … *Highly Imp.* | HOW EFFECTIVE<br>*Not Eff.* … *Highly Eff.* | |
|---|---|---|---|---|---|
| ( 7) | a. | Student orientation | 1 2 3 4 5 | 1 2 3 4 5 | NA |
| ( 9) | b. | Student Accountability System | 1 2 3 4 5 | 1 2 3 4 5 | NA |
| (11) | c. | Student negotiation | 1 2 3 4 5 | 1 2 3 4 5 | NA |
| (13) | d. | Predesigned projects | 1 2 3 4 5 | 1 2 3 4 5 | NA |
| (15) | e. | Negotiated projects | 1 2 3 4 5 | 1 2 3 4 5 | NA |
| (17) | f. | Student journals | 1 2 3 4 5 | 1 2 3 4 5 | NA |
| (19) | g. | Competencies | 1 2 3 4 5 | 1 2 3 4 5 | NA |
| (21) | h. | Career explorations | 1 2 3 4 5 | 1 2 3 4 5 | NA |
| (23) | i. | Learning level process | 1 2 3 4 5 | 1 2 3 4 5 | NA |
| (25) | j. | Special placements | 1 2 3 4 5 | 1 2 3 4 5 | NA |
| (27) | k. | ILA Materials | 1 2 3 4 5 | 1 2 3 4 5 | NA |
| (29) | l. | Employer seminars | 1 2 3 4 5 | 1 2 3 4 5 | NA |
| (31) | m. | Student retreat | 1 2 3 4 5 | 1 2 3 4 5 | NA |
| (33) | n. | Group activities (e.g., cadres) | 1 2 3 4 5 | 1 2 3 4 5 | NA |
| (35) | o. | Others *(please specify)* | 1 2 3 4 5 | 1 2 3 4 5 | NA |

______________________________

______________________________

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**Please ignore the numbers in parenthesis in the left margin. These numbers are for data processing purposes only.*

*On the grid below please indicate how helpful you feel EBCE experiences have been in helping students to do each of the following: (Circle 1 to 5 for each statement)*

| | | | *Very Helpful* | | | | *Of Little or No Help* |
|---|---|---|---|---|---|---|---|
| (37) | 2. | Solve problems logically. | 1 | 2 | 3 | 4 | 5 |
| (38) | 3. | Understand the role of science in our society today. | 1 | 2 | 3 | 4 | 5 |
| (39) | 4. | Understand more about themselves. | 1 | 2 | 3 | 4 | 5 |
| (40) | 5. | Get along with others. | 1 | 2 | 3 | 4 | 5 |
| (41) | 6. | Understand the democratic process. | 1 | 2 | 3 | 4 | 5 |
| (42) | 7. | Develop their own creativity. | 1 | 2 | 3 | 4 | 5 |
| (43) | 8. | Learn how their interests and abilities fit into potential careers. | 1 | 2 | 3 | 4 | 5 |
| (44) | 9. | Learn how society's values, the government and the economy affect the world of work. | 1 | 2 | 3 | 4 | 5 |
| (45) | 10. | Learn to analyze potential jobs. | 1 | 2 | 3 | 4 | 5 |
| (46) | 11. | Learn how to find and keep a job. | 1 | 2 | 3 | 4 | 5 |
| (47) | 12. | Learn the basic skills necessary for the careers that interest them. | 1 | 2 | 3 | 4 | 5 |
| (48) | 13. | Improve their reading skills. | 1 | 2 | 3 | 4 | 5 |
| (49) | 14. | Improve their math skills. | 1 | 2 | 3 | 4 | 5 |
| (50) | 15. | Improve their oral communication skills. | 1 | 2 | 3 | 4 | 5 |
| (51) | 16. | Impove their written communication skills. | 1 | 2 | 3 | 4 | 5 |
| (52) | 17. | Know what level of basic skills proficiency is required in the jobs of interest to them. | 1 | 2 | 3 | 4 | 5 |
| (53) | 18. | Gain confidence in their ability to apply basic skills to complete tasks and to solve problems around them. | 1 | 2 | 3 | 4 | 5 |

|  |  |  | Very Helpful |  |  |  | Of Little or No Help |
|---|---|---|---|---|---|---|---|
| (54) | 19. | Become acquainted with a broad range of resources to use in gathering information for work and decision making. | 1 | 2 | 3 | 4 | 5 |
| (55) | 20. | Communicate comfortably with adults. | 1 | 2 | 3 | 4 | 5 |
| (56) | 21. | Take responsibility for their own actions. | 1 | 2 | 3 | 4 | 5 |
| (57) | 22. | Become more open to ideas and values different from their own. | 1 | 2 | 3 | 4 | 5 |
| (58) | 23. | Use information obtained through direct experiences in making decisions. | 1 | 2 | 3 | 4 | 5 |
| (59) | 24. | Feel prepared to accept adult responsibilities. | 1 | 2 | 3 | 4 | 5 |

(60) 25. What factors, if any, have you seen this year that are contributing in a major way to the success of the EBCE program?

________________________________________

________________________________________

________________________________________

(62) 26. What obstacles, if any, have you seen this year that are limiting the success of the EBCE program?

________________________________________

________________________________________

________________________________________

(64) 27. In what areas do you feel EBCE students have made the greatest growth this year? Why?

________________________________________

________________________________________

________________________________________

(66) 28. In what areas do you feel EBCE students have made the least growth this year? Why?

(68) 29. What effects, if any, do you feel the EBCE program has had on the regular high school program? Why?

(70) 30. What effects, if any, do you feel the EBCE program has had on the community? Why?

(72) 31. What changes, if any, would you suggest in the EBCE program for next year?

(74) 32. What types of technical assistance did you receive from NWREL? How useful was each type of technical assistance?

(76) 33. What additional types of technical assistance, if any, did you request this year from NWREL that you did not receive?

## STUDENT APPLICATION/BACKGROUND QUESTIONNAIRE

### Purpose

When students formally apply to enter EBCE they will be asked to complete a brief application form containing information about family background, students' previous employment history, short- and long-range educational and work goals, past involvement in high school and community activities and reasons for wanting to enter the EBCE program. This information will be used to describe the students entering EBCE and also to compare changes over the year in areas such as educational and occupational aspirations. A modification of this questionnaire, deleting items referring to EBCE, can be administered and used to describe the comparison group students.

### Directions for Data Collection

This application/background questionnaire combines the requirement for parental permission for a student to participate in EBCE with a brief background information section. This instrument is completed individually by students as they apply for entry into the program. Students should be told that the information collected can be used to help the project staff know them better and will be held in confidence. This form takes about 20 minutes to complete.

# EBCE STUDENT APPLICATION

Student____________________________________ Date________________

Age______ Date of Birth____/____/____ Sex: M F Grade Level________
Month/Day/Year (Circle one)

High School Counselor (if applicable)_________________________________

Address____________________________________ Telephone______________
*street*

_______________________________________________________________
*city* *state* *zip*

In Emergency, Contact____________________________ Telephone___________

Parent(s) or Guardian(s)__________________________________________

Parent(s)'s or Guardian(s)'s Occupation(s)____________________________

Describe in a paragraph your reasons for wishing to be in EBCE:

| |
|---|
| |

## PARENT PERMISSION

Date__________________

I have discussed the EBCE program with ________________________________
and grant permission for his/her full participation in EBCE.

________________________________
*signature*

(1)*6 1

(3) _ _ Site Number

(5) _ _ Student Number

Student Name____________________

Date____________________________

## Student Background Questionnaire

*Please check the answers that describe you, or write in responses when asked to do so. Ignore the numbers in parentheses in the left margins which are for data processing purposes only.*

1. Have you ever worked for pay outside of your home on a regular basis? *(If no, ignore question 2 and go directly to question 3.)*

(7) 1. ☐ Yes 2. ☐ No

2. If you answered yes to question 1, what types of work do you do now or have you done in the past?

____________________ ____________________

____________________ ____________________

____________________ ____________________

____________________ ____________________

(8) _

3. What do you expect to be doing one year after completing high school? *(check one or more answers)*

(9) 1. ☐ Working full-time

(10) 2. ☐ Entering an apprenticeship or on-the-job training program

(11) 3. ☐ Going into regular military service or to a service academy

(12) 4. ☐ Attending a vocational, technical, trade or business school

(13) 5. ☐ Attending a junior or community college

(14) 6. ☐ Attending a four-year college or university

(15) 7. ☐ Working part-time

(16) 8. ☐ Other (travel, take a break)

(17) 9. ☐ I have no idea what I'll be doing

---

**Please ignore the numbers in parentheses in the left margin. These numbers are for data processing purposes only.*

(18) 4. How far do you plan to pursue your formal education? *(check one)*

1. ☐ Don't plan to finish high school
2. ☐ Graduate from high school
3. ☐ High school plus one or two years of college, community college or special training
4. ☐ High school plus three or more years of college, community college or special training
5. ☐ Graduate from four-year college
6. ☐ Graduate or professional training beyond college

5. List two jobs you feel you would like to hold after completing your education. Be as specific as possible (for example, say "a mechanical drafter" rather than "working at National Engineering").

(19) __ 1. ______________________________

(20) __ 2. ______________________________

(21) 6. Have you observed or directly worked at either or both of the two preferred jobs listed for question 5?

1. ☐ I have observed or worked at both jobs
2. ☐ I have observed or worked at one of these two jobs
3. ☐ I have not observed or worked at either job

(22) 7. How sure are you of steps to prepare for and enter the job which you would most like to hold after graduation?

1. ☐ Do not know where to begin
2. ☐ Have some idea
3. ☐ Steps pretty clear
4. ☐ Steps quite clear

(23) 8. Do you feel you will be able to complete the necessary steps for this job?

1. ☐ Yes
2. ☐ Not sure
3. ☐ Probably not

9. What are the occupations of your father and mother?

(24) __ Father's occupation ______________________________

(25) __ Mother's occupation ______________________________

10. What high school activities (such as choir or basketball team) did you participate in the year before entering EBCE? Write "none" if you did not participate in any. If you participated in sports, list the actual names of the sports.

______________________________

______________________________

(26) __

11. What specific high school activities, if any, do you plan to participate in this year?

______________________________

______________________________

(27) __

12. List your hobbies or recreational activities.

______________________________

______________________________

(28) __

(29) 13. Approximately how many pamphlets, brochures, manuals or magazine articles did you read this past school year?

1. ☐ None
2. ☐ 1 to 5
3. ☐ 6 to 10
4. ☐ 11 to 20
5. ☐ 21 to 30
6. ☐ More than 30

(30) 14. Are you:

1. ☐ White
2. ☐ Black
3. ☐ Oriental
4. ☐ Spanish descent (Chicano, Puerto Rican and so forth)
5. ☐ Native American Indian
6. ☐ Native Alaskan
7. ☐ Other (specify) ______________________________

(31) 15. What is the highest level of formal education your father has completed?

1. ☐ None
2. ☐ Elementary School
3. ☐ Some high school
4. ☐ High school graduate
5. ☐ Some postsecondary (for example, some college, jr. college, business school, trade or technical school)
6. ☐ College graduate (four-year degree)
7. ☐ Some graduate work
8. ☐ Advanced degree
9. ☐ Do not know

(32) 16. What is the highest level of formal education your mother has completed?

1. ☐ None
2. ☐ Elementary school
3. ☐ Some high school
4. ☐ High school graduate
5. ☐ Some postsecondary (for example, some college, jr. college, business school, trade or technical school)
6. ☐ College graduate (four-year degree)
7. ☐ Some graduate work
8. ☐ Advanced degree
9. ☐ Do not know

17. How important was each of the following factors in deciding to join EBCE? *(Circle one number for each question. For example, "1"=not important, "3"=somewhat important, and "5"=extremely important.)*

| | | | *Not Important* | | | | *Extremely Important* |
|---|---|---|---|---|---|---|---|
| (33) | 1. | I wanted more freedom/independence | 1 | 2 | 3 | 4 | 5 |
| (34) | 2. | I wanted to choose my own learning style | 1 | 2 | 3 | 4 | 5 |
| (35) | 3. | I wanted to learn about careers | 1 | 2 | 3 | 4 | 5 |
| (36) | 4. | I did not like my previous school | 1 | 2 | 3 | 4 | 5 |
| (37) | 5. | I wanted to prepare for a job | 1 | 2 | 3 | 4 | 5 |
| (38) | 6. | I was bored with school | 1 | 2 | 3 | 4 | 5 |
| (39) | 7. | I heard the EBCE program was easy | 1 | 2 | 3 | 4 | 5 |
| (40) | 8. | Other (specify) ________________<br>________________________________ | 1 | 2 | 3 | 4 | 5 |

## STUDENT END-OF-YEAR QUESTIONNAIRE

### Purpose

This questionnaire is designed to (1) follow up on questions asked on the Student Background Questionnaire administered at the beginning of the year to assess any change that might have occurred during the year, (2) assess student knowledge about job trends and related information and (3) collect data on student reflections about their school/EBCE experiences. It can be used with comparison group students by omitting items that relate only to EBCE.

### Directions for Data Collection

This questionnaire can be administered to EBCE students as a group during the posttest session, approximately one month prior to the end of the school year. This allows time for students absent from the group testing session to complete this questionnaire on their own and turn it in to a staff member. This is not a timed test. Students generally complete it in 20 to 40 minutes. Since the intent of the instrument is to obtain students' opinions rather than to assess their reading skill, it is useful for the project staff to identify any students who are particularly poor readers and have someone separately read the questionnaire aloud to these students as they complete it.

(1)* 6 2 Name________________________________Date__________________________

(3) _ _ School District_______________________________________________

(5) _ _ Student ID Number

## EBCE STUDENT END-OF-YEAR QUESTIONNAIRE

*You are ready to complete a year of participation in your Experience-Based Career Education (EBCE) Program. This questionnaire asks some of the same questions that you may have been asked in September and adds some new ones that cover your career plans, personal experiences and knowledge about the world of work. If you have any questions while you are completing the survey please ask for assistance. Ignore the numbers in parentheses in the left margins. These numbers are for data processing purposes only.*

(7) 1. What do you expect to be doing one year after completing high school?

1. ☐ Working full-time
2. ☐ Entering an apprenticeship or on-the-job training program
3. ☐ Going into regular military service or to a service academy
4. ☐ Attending a vocational, technical, trade or business school
5. ☐ Attending a junior or community college
6. ☐ Attending a four-year college or university
7. ☐ Working part-time
8. ☐ Other (travel, take a break)
9. ☐ I have no idea what I'll be doing

(8) 2. How far do you plan to pursue your formal education? *(check one)*

1. ☐ Don't plan to finish high school
2. ☐ Graduate from high school
3. ☐ High school plus one or two years of college, community college or special training
4. ☐ High school plus three or more years of college, community college or special training
5. ☐ Graduate from four year college
6. ☐ Graduate or professional training beyond college

---

**Numbers in parenthesis are for key punching purposes only.*

(9) 3. List two jobs you feel you might like to hold after completing
(10) your education. Give the vocation rather than location. *(For example, say "a drafter" rather than "working at National Engineering.")*

1. ______________________________

2. ______________________________

(11) 4. Have you observed or directly worked at either or both of the two preferred jobs listed for question 3?

1. ☐ I observed or worked at both jobs
2. ☐ I observed or worked at one of these two jobs
3. ☐ I did not observe or work at either job

(12) 5. How sure are you of steps to prepare for and enter the job which you would most like to hold after graduation?

1. ☐ Do not know where to begin
2. ☐ Have some idea
3. ☐ Steps pretty clear
4. ☐ Steps quite clear

(13) 6. Do you feel you will be able to complete the necessary steps for this job?

1. ☐ Yes
2. ☐ Not sure
3. ☐ Probably not

7. What aspects of your learning experience this year (if any) influenced your choice of potential careers? *(Check as many as apply.)*

(14) 1. ☐ None
(15) 2. ☐ I talked to teachers or a counselor about my choices
(16) 3. ☐ I talked to people who work at the jobs
(17) 4. ☐ I talked with relatives or friends about my choices
(18) 5. ☐ I had experience in observing or trying out the jobs
(19) 6. ☐ I read about the jobs
(20) 7. ☐ Other *(please write in)* ______________________________

______________________________

8. a. Are there any jobs that last year seemed interesting that you now feel do not match your interests or abilities?

(21) 1. ☐ Yes 2. ☐ No

b. If yes, list these jobs ______________________________

______________________________

c. Why do you now feel that the job(s) no longer match your interests or abilities? ______________________________

______________________________

______________________________

______________________________

d. What caused you to change your mind about the job(s)? *(Check one or more of the following.)*

(22) 1. ☐ Advice from teachers or a counselor
(23) 2. ☐ Advice from relatives or friends
(24) 3. ☐ Advice from someone who works at the job(s)
(25) 4. ☐ Information I have read about the job(s)
(26) 5. ☐ Experience in observing or trying out the job(s)
(27) 6. ☐ My interests have changed
(28) 7. ☐ I don't know
(29) 8. ☐ Other *(please state your reason)* ______________________________

______________________________

______________________________

______________________________

*On the grid below please circle a number from 1 to 5 to indicate how helpful you feel EBCE has been to you in reaching each objective. (For example, if you feel EBCE was very helpful circle 5, if moderately helpful circle 3 and if little or no help circle 1.)*

How helpful do you feel your EBCE experiences this year have been in assisting you to--

| | | | *Of Little or No Help* | | | | *Very Helpful* |
|---|---|---|---|---|---|---|---|
| (30) | 9. | solve problems logically. | 1 | 2 | 3 | 4 | 5 |
| (31) | 10. | understand the role of science in our society today. | 1 | 2 | 3 | 4 | 5 |
| (32) | 11. | understand more about yourself. | 1 | 2 | 3 | 4 | 5 |
| (33) | 12. | get along with others. | 1 | 2 | 3 | 4 | 5 |
| (34) | 13. | understand the democratic process. | 1 | 2 | 3 | 4 | 5 |
| (35) | 14. | develop your own creativity. | 1 | 2 | 3 | 4 | 5 |
| (36) | 15. | learn how your interests and abilities fit into potential careers. | 1 | 2 | 3 | 4 | 5 |
| (37) | 16. | learn how society's values, the government and the economy affect the world of work. | 1 | 2 | 3 | 4 | 5 |
| (38) | 17. | learn what to look at when considering a job. | 1 | 2 | 3 | 4 | 5 |
| (39) | 18. | learn how to find and keep a job. | 1 | 2 | 3 | 4 | 5 |
| (40) | 19. | learn the basic skills necessary for the careers that interest you. | 1 | 2 | 3 | 4 | 5 |
| (41) | 20. | improve your reading skills. | 1 | 2 | 3 | 4 | 5 |
| (42) | 21. | improve your math skills. | 1 | 2 | 3 | 4 | 5 |
| (43) | 22. | improve your oral communication skills. | 1 | 2 | 3 | 4 | 5 |
| (44) | 23. | improve your writing skills. | 1 | 2 | 3 | 4 | 5 |

|  |  |  | *Of Little or No Help* |  |  |  | *Very Helpful* |
|---|---|---|---|---|---|---|---|
| (45) | 24. | know what level of basic skills proficiency is required in the jobs of interest to you. | 1 | 2 | 3 | 4 | 5 |
| (46) | 25. | gain confidence in your ability to apply basic skills to complete tasks and to solve problems around you. | 1 | 2 | 3 | 4 | 5 |
| (47) | 26. | become acquainted with a broad range of resources to use in gathering information for work and decision making. | 1 | 2 | 3 | 4 | 5 |
| (48) | 27. | communicate comfortably with adults. | 1 | 2 | 3 | 4 | 5 |
| (49) | 28. | take responsibility for your own actions. | 1 | 2 | 3 | 4 | 5 |
| (50) | 29. | become more open to ideas and values different from your own. | 1 | 2 | 3 | 4 | 5 |
| (51) | 30. | use information obtained through direct experiences in making decisions. | 1 | 2 | 3 | 4 | 5 |
| (52) | 31. | feel prepared to accept adult responsibilities. | 1 | 2 | 3 | 4 | 5 |

(53) 32. How would you rate the overall quality of your EBCE program?

*Poor* *Excellent*

1 2 3 4 5

(54) 33. If you had it to do over again, do you think you would decide to participate in EBCE?

*Definitely no* *Definitely yes*

1 2 3 4 5

(55) 34. In EBCE have you felt that you could progress at your own rate?

*Definitely no* *Definitely yes*

1 2 3 4 5

(56) 35. In comparison with the regular high school program, how much opportunity did EBCE provide you for learning about occupations?

*Much less* *About same* *Much more*

1 2 3 4 5

(57) 36. In comparison with the regular high school program, how much opportunity did EBCE provide you for general learning?

*Much less* *About same* *Much more*

1 2 3 4 5

(58) 37. In comparison with past experiences in the regular high school program, how motivated are you to learn in EBCE?

*Much less* *About same* *Much more*

1 2 3 4 5

(59) 38. What courses, if any, have you taken this year at the high school, a community college, employer site or elsewhere? *(Please list any courses and where they were taken.)*

| Name of Courses | Where Did You Take This Course? |
|---|---|
| | |
| | |
| | |
| | |

(60) 39. This year, approximately how many pamphlets, brochures, manuals or magazine articles did you read?

1. None
2. 1 to 5
3. 6 to 10
4. 11 to 20
5. 21 to 30
6. More than 30

40. During the school year, approximately how many visits did you make to the following community resources? *(Write in the number next to each community resource. Put "O" if you did not visit a particular resource.)*

| | | Number of Visits |
|---|---|---|
| (61) | Public Libraries | |
| (62) | Museums | |
| (63) | Courts | |
| (64) | Public Meetings | |
| (65) | Colleges or Universities | |
| (66) | State Legislature | |

Check whether you agree or disagree with each of these statements:

| | | | Agree(1) | Disagree(2) |
|---|---|---|---|---|
| (67) | 41. | Most persons remain in the same job throughout their adult lives. | ☐ | ☐ |
| (68) | 42. | Few women work outside of the home after marriage. | ☐ | ☐ |
| (69) | 43. | Less than one-third of all job openings require a college degree. | ☐ | ☐ |
| (70) | 44. | Most people have the ability to do well in any job if they set their minds to it. | ☐ | ☐ |
| (71) | 45. | There is only one "right job" for a person in terms of his/her abilities. | ☐ | ☐ |
| (72) | 46. | The unemployment rate of 20-year-olds in the labor market is usually less than the rate for other adults. | ☐ | ☐ |
| (73) | 47. | The State Employment Service Office provides free information about job openings and job training programs. | ☐ | ☐ |
| (74) | 48. | Apprentices are paid while they learn. | ☐ | ☐ |
| (75) | 49. | The English and math skills of freshmen are about the same from one college to another. | ☐ | ☐ |
| (76) | 50. | Ten years from now most jobs will require four or more years of college. | ☐ | ☐ |

(77, 78) 51. What do you think are the two greatest weaknesses of the EBCE program? *(Check the responses you feel are most applicable or write in your own response.)*

1. ☐ Some students can't handle the freedom
2. ☐ Problems in the organization/staffing of the program
3. ☐ Students not receiving sufficient training in basic skills or survival skills
4. ☐ Inadequate supervision of students on job sites
5. ☐ Lack of a variety of job sites to meet students' interests
6. ☐ Other *(please write in)* ______________________________

______________________________________________________

(79, 80) 52. What do you think are the two greatest strengths of the EBCE program? *(Check the responses you feel are most applicable or write in your own response.)*

1. ☐ Good alternative to a regular school program
2. ☐ Quality of the staff
3. ☐ Students learn about a variety of careers
4. ☐ Students learn about "real life" situations and responsibility
5. ☐ Good way of getting students to learn
6. ☐ Experience in working with adults
7. ☐ Individual treatment of students
8. ☐ Other *(please write in)* ______________________________

______________________________________________________

## STUDENT PROJECTS EVALUATION FORMS

### Purpose

These two forms are used to obtain an independent evaluation of students' Life Skills projects and resulting reports for a random sample of students in EBCE. This serves as a primary method for assessing the Life Skills dimension of EBCE. The evaluation can be done by the program evaluator or a curriculum specialist external to the EBCE program. Form A evaluates the extent to which an individual student's project meets the objectives of the Life Skills area, incorporates the use of Basic Skills, relates to Career Development outcomes, uses community sites productively, utilizes a variety of resources in an integrated manner, capitalizes on a student's interests, contains adequately specified performance criteria and is comprehensive. Resulting reports are assessed in terms of ability to communicate, technical writing quality, achievement of specified criteria levels, integration of a student's experiences and an overall rating. Form B evaluates the total set of projects completed by an individual with respect to use of a variety of resources, creation of a variety of outcomes, the challenge of the projects to the student and value of the projects in comparison with the amount of credits obtained.

### Directions for Data Collection

A random sample of five or more EBCE students should be drawn with an alternate list of additionally sampled students to serve as replacements for individuals in the primary sample in case any of these students leave the program. The learning managers should be oriented to the purpose of the independent evaluation and given the names of the sampled students so that their projects and reports can be saved after the learning manager has evaluated each and discussed it with the student. Student permission should also be obtained for having an outside person read his or her projects and reports. In order to judge the appropriateness of a particular project to an individual student it is important to provide a brief profile of each sampled student to the person rating these student projects. A one or two-paragraph description of each student by the project staff is very helpful and should include the student's grade level, sex, career and personal interests, educational and occupational aspirations, reasons for joining EBCE and pretest scores in Basic Skills and on attitude measures.

## EBCE INDIVIDUAL STUDENT PROJECT EVALUATION (FORM A)

(3-6)* Student's Name ______________________ Site ______________________

(7, 8) Life Skills Area ________________ Predesigned ____ or Individual ____

Project Title ________________________________________________

(9-11) Starting Date __________ Completion Date ______________ Total Time (days) ____

(12) Rater's Name ________________________

### Project Evaluation

1. Are the project activities designed to help the student meet the specific objectives of this Life Skills area? *(Circle one)*

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *Definitely No* | | | | *Undecided* | | | | *Definitely Yes* |
| (13) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Comments:

2. Do the project activities meaningfully incorporate the use of Basic Skills in a way to promote growth in communications, reading and/or mathematics?

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *Definitely No* | | | | *Undecided* | | | | *Definitely Yes* |
| (14) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Comments:

---

**Please ignore the numbers in parentheses in the left margin. These numbers are for data processing purposes only.*

3. Is there a relationship between project activities and Career Development outcome objectives?

*Definitely No* *Undecided* *Definitely Yes*

(15) 1 2 3 4 5 6 7 8 9

Comments:

4. Was the employer or community site used productively? *(Check if employer or community site is not used:* ☐ *)*

*Definitely No* *Undecided* *Definitely Yes*

(16) 1 2 3 4 5 6 7 8 9

Comments:

5. Do the project activities utilize a variety of resources in an integrated and meaningful way?

*Definitely No* *Undecided* *Definitely Yes*

(17) 1 2 3 4 5 6 7 8 9

Comments:

6. Is the project designed to capitalize on student interests?

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *Definitely No* | | | | *Undecided* | | | | *Definitely Yes* |
| (18) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Comments:

7. Are the performance criteria specified adequately?

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *Definitely No* | | | | *Undecided* | | | | *Definitely Yes* |
| (19) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Comments:

8. Are the activities and the criterion levels for those activities appropriate for the student's abilities? *(Check if criterion levels are not specified:* ☐ *)*

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *Definitely No* | | | | *Undecided* | | | | *Definitely Yes* |
| (20) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Comments:

9. Is the project sufficiently comprehensive and complete?

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *Definitely No* | | | | *Undecided* | | | | *Definitely Yes* |
| (21) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Comments:

10. What is the quality of the learning manager's written evaluation?

*(Check if there were no written comments: ☐ )*

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *Low Quality* | | | | *Undecided* | | | | *High Quality* |
| (22) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Comments:

## Product Evaluation

11. Does the student product have the technical quality (e.g. legibility, grammar, clarity, etc.) that you would expect of a student of his/her ability?

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *Definitely No* | | | | *Undecided* | | | | *Definitely Yes* |
| (23) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Comments:

12. Does the student product communicate well?

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *Definitely No* | | | | *Undecided* | | | | *Definitely Yes* |
| (24) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Comments:

13. Does the student product indicate that he/she reached the criterion level specified for each activity? *(Check if criterion level not specified:* ☐ *)*

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *Definitely No* | | | | *Undecided* | | | | *Definitely Yes* |
| (25) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Comments:

14. How would you rate this product in terms of the student's demonstrated ability to integrate his/her experience?

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *No Indication of Integration* | | | | *Undecided* | | | | *Definitely Integrated* |
| (26) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Comments:

15. Given this student's ability, what is your overall evaluation of the product?

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *Definitely Negative* | | | | *Undecided* | | | | *Definitely Positive* |
| (27) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Comments:

## EBCE COMBINED STUDENT PROJECTS EVALUATION (FORM B)

Student's name________________________________

Site_______________________________________

Rater's name__________________________________

Projects Reviewed *(Write in the boxes the number of predesigned and individual projects reviewed.)*

| | Predesigned Projects | Life Skill Area | | Individual Projects |
|---|---|---|---|---|
| (28)* | ☐ | Creative Development | (29) | ☐ |
| (30) | ☐ | Critical Thinking | (31) | ☐ |
| (32) | ☐ | Functional Citizenship | (33) | ☐ |
| (34) | ☐ | Personal/Social Development | (35) | ☐ |
| (36) | ☐ | Science | (37) | ☐ |
| (38) | ☐ | Basic Skills - Mathematics | (39) | ☐ |
| (40) | ☐ | Basic Skills - Communications | (41) | ☐ |
| (42) | ☐ | Other *(list)*________________ | (43) | ☐ |
| (44) | ☐ | Other______________________ | (45) | ☐ |
| (46) | ☐ | Other______________________ | (47) | ☐ |

### Overall Project Evaluation

1. Do the projects encourage the use of a variety of resources such as printed and A/V materials, public agencies, people, natural environment, local codes and laws, local events, etc.?

| | *Definitely No* | | | | *Undecided* | | | | *Definitely Yes* |
|---|---|---|---|---|---|---|---|---|---|
| (48) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Comments:

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**Please ignore the numbers in parentheses in the left margin. These numbers are for data processing purposes only.*

2. Do the projects encourage producing a variety of products, such as written reports, oral presentations, tape recordings, handicrafts, charts, citizen participation, activity performance, etc.?

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *Definitely No* | | | | *Undecided* | | | | *Definitely Yes* |
| (49) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Comments:

3. As a whole, how challenging were these projects for this student?

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *Not Challenging at All* | | | | *Undecided* | | | | *Very Challenging* |
| (50) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Comments:

4. Are the projects sufficiently challenging to this student to be worth the credit obtained?

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | *Definitely No* | | | | *Undecided* | | | | *Definitely Yes* |
| (51) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Comments:

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